

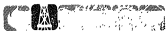
Petroleum Supply Monthly

Energy Information Administration
Washington, D.C. 20585

January 1983



Petroleum Supply Monthly

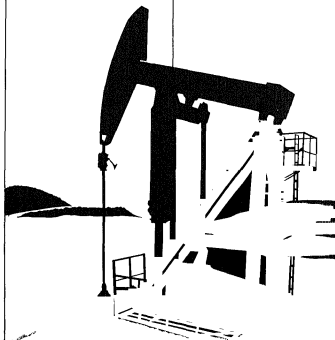


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Washington, D.C. 20585



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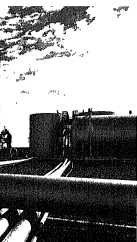
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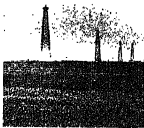
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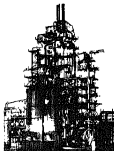
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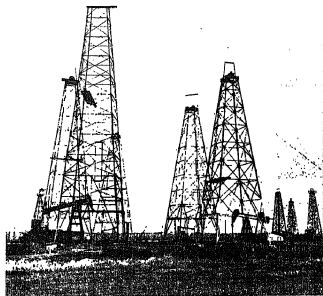
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Petroleum Focus



Petroleum Supply Summary

Average Volume for Period (Million Barrels Per Day)	December			Cumulative January Through December		
	1982	1981	% Change	1982	1981	% Change
Total Product Supplied	14.9	18.6	-10.3	18.2	16.1	-5.3
Motor Gasoline	6.2	6.7	-6.6	6.6	6.6	-1.2
Distillate Fuel Oil	2.8	3.2	-13.1	2.7	2.8	-5.7
Residual Fuel Oil	1.3	2.2	-42.4	1.7	2.1	-20.1
Crude Inputs to Refineries	11.8	12.8	-4.7	11.8	12.5	-5.4
Crude Oil and Natural Gas Liquids Production	10.3	10.2	1.2	10.2	10.2	0.4
Net Imports ¹	3.6	6.2	-90.8	4.2	6.4	-21.9
Net Crude Oil Imports ²	2.6	3.8	-30.8	3.1	3.9	-21.9
SPR Imports	0.1	0.2	-12.1	0.2	0.3	-34.8
Net Product Imports	0.8	1.2	-33.0	1.0	1.2	-19.4
Crude Oil Stock Withdrawal ³	(a)	0.08	—	0.08	0.05	—
Product Stock Withdrawal	0.20	0.76	—	0.24	0.13	—
Stocks at End of Period (Million Barrels)						
Crude Oil ⁴	354	363	-2.6			
Motor Gasoline ⁴	237	253	-6.4			
Distillate Fuel Oil	191	192	-5.6			
Residual Fuel Oil	68	78	-12.7			
Total Product	792	890	-11.0			
SPR	293	230	27.4			
Total	1,440	1,464	-3.0			

¹Gross imports of crude oil (including Strategic Petroleum Reserve) and petroleum products less exports of crude oil and petroleum products.

²Excluding Strategic Petroleum Reserve (SPR).

³Including blending components.

(a) Less than 5,000 barrels per day

Note: Percent changes are based on unrounded values. December 1982 data are estimates based on weekly data, except for export estimates which are November 1982 monthly values.

Source: Energy Information Administration, *Petroleum Supply Monthly*, January 1983.

U.S. Petroleum Developments: 1982

Petroleum developments in 1982 were characterized by continued declines in many areas:

- Imports and petroleum consumption continued to decline.
- Stocks of products declined sharply and remained low.
- Crude oil prices as well as retail and wholesale refined product prices fell.
- Refinery production and capacity declined.
- Drilling activity decreased substantially from the record peak in 1981.

Crude oil production and exports did not follow the downward trend. Crude oil production was virtually unchanged from the 1981 rate; while exports increased for the seventh consecutive year.

Petroleum Consumption

During 1982, petroleum consumption in the United States (measured as products supplied for domestic use) declined for the fourth consecutive year (see Figure 1). The average consumption of 15.2 million barrels per day, was about 900 thousand barrels per day lower than the 1981 average and was the lowest annual average for petroleum consumption since 1971. Even though prices fell, especially during the first quarter of 1982, consumption continued to drop as the economy weakened. Continued conservation efforts and fuel switching, induced by past sharp petroleum product price increases, also contributed to the decline, even though petroleum prices were generally lower during 1982 than during 1981.

Despite the continuing decline in consumption, petroleum remained the principal U.S. energy source. About 43 percent of the energy consumed in the United States during 1982 came from petroleum (see Figure 2). This percentage, which reached a peak at 49 percent in 1977, continued to drop as high petrole-

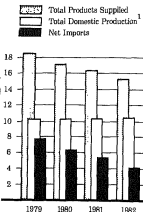
um prices and the relatively lower cost of using fuels such as natural gas at coal encouraged conservation by consumers and conversion to other fuels.¹

Motor gasoline supplied for domestic use averaged 6.5 million barrels per day during 1982, 12 percent below the average for 1978, the peak year of gasoline consumption and about 1 percent below that of 1981.² This decline occurred despite the fact that gasoline prices were lower throughout most of 1982 than those in 1981. Residual fuel oil and distillate fuel oil also showed large declines in consumption, down 20 percent and 18 percent, respectively, from their 1981 levels. Consumption of these and other major refined products generally declined.

¹Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(82/1) (Washington, D.C., December 1982), p. 6.

²Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-01-83(401) (Washington, D.C., January 1983) 28.

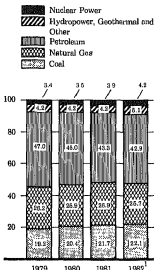
Figure 1. Petroleum Summary
(Million Barrels per Day)



¹Includes crude oil and natural gas plant liquid production.

Sources: *Petroleum Supply Monthly*

Figure 2. Consumption of Energy by Type (Percent)



¹ Data for 1982 are for the months of January through September.

Source: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0085-(81/12), Washington, D.C., December 1982

crossed by an average of 5 percent during the year (see Figure 3).²

Distillate fuel oil consumption, which averaged 2.7 million barrels per day in 1982, was about 6 percent below the average for 1981.³ The October 1982 price for home heating oil was approximately \$1.20 per gallon compared with the average price of approximately \$1.19 per gallon in October 1981.⁴

After decreasing nearly 17 percent between 1980 and 1981, residual fuel oil consumption continued to decline during 1982, averaging 1.7 million barrels per day, about 20 percent below the 1981 average.⁵ The average retail price per barrel, excluding tax, of residual fuel oil in the first 10 months of 1982 was \$29.16, more than 10 percent below the average price for 1981.⁶ That the decline

in consumption came at a time when prices were falling indicates the impact of the sluggish economy on industrial users, the second largest consumers of residual fuel oil (Electric utilities are largest consumers).

Fuel-switching by electric utilities and industrial plants also contributed to the decline in residual fuel oil consumption. During 1981, the costs of generating electricity were significantly higher than utilities burning residual fuel oil (the

²Petroleum Supply Monthly, (January 1983) pp. 27, 32, and 36.

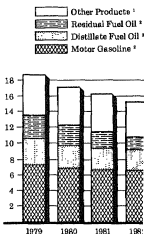
³Petroleum Supply Monthly (January 1983) p. 27.

⁴Energy Information Administration, *Monthly Petroleum Product Price Report*, DOE/EIA-0032 (82/10) (Washington, D.C. October 1982) Table 8.

⁵Petroleum Supply Monthly (January 1983) p. 32.

⁶Monthly Petroleum Product Price Report (October 1982) Table 3.

Figure 3. Petroleum Products Supplied for Domestic Use (Million Barrels per Day)



¹Other petroleum products include liquefied gases, jet fuels, and petrochemical stocks.

²Reflects recent 1979 and 1980 figures. Explanatory Note 4.

Source: Petroleum Supply Monthly

for those burning coal and natural gas. The cost of burning residual fuel oil at steam electric utilities was \$5.29 per million British thermal units (Btu's), approximately three and a half times the cost of burning coal (\$1.55 per million Btu's) and nearly twice the cost of burning natural gas (\$2.83 per million Btu's).*

Refinery Operations

The total operable distillation capacity⁴ of petroleum refineries in the United States decreased by about 1.1 million barrels per day during 1982 as 52 refineries shut down. Refinery capacity had previously decreased by 451 thousand barrels per day as a result of refinery closings during 1981.⁵ The continued refinery closings are the result of a combination of factors including the decreased demand for petroleum products, market shifts, increased transportation costs, consolidation of refinery operations, and decontrol of crude oil prices.

U.S. refineries operated at about 70 percent of capacity in 1982, partly as a result of the same factors which caused so many refineries to close. Crude oil inputs to refineries averaged about 11.8 million barrels per day during the year, about 5 percent below the 1981 average.⁶

Petroleum Stocks

Total petroleum stocks (excluding Strategic Petroleum Reserve stocks) decreased about 107 million barrels during 1982. About 98 million barrels of the decrease were in inventories of refined products.⁷ The drawdowns reflect refiners' decisions to maintain lower inventories.

At the end of 1982, stock levels of most major products were well below the levels at the end of 1981. Distillate fuel oil inventories, at 181 million barrels, were 6 percent below the level at the end of 1981; residual fuel oil inventories, at 68 million barrels, were nearly 13 percent below the level at the end of 1981. Inventories of motor gasoline stood at 237 million barrels, about 6 percent below the level at the end of 1981.⁸ Even though inventories were at substantially lower levels at the end of 1982, supplies of petroleum products, and of

fuel oils in particular, were expected to be adequate to meet the anticipated lower demand for the winter of 1982-1983.

Imports

The downward trend in imports continued during 1982 as net imports (gross imports minus exports) of crude oil and petroleum products sank to an average of 4.2 million barrels per day, 22 percent below the average for 1981. During 1981, net imports averaged 5.4 million barrels per day, 15 percent below the level during 1980. Of the 1982 net import amounts, net crude oil imports averaged 3.2 million barrels per day, down 23 percent from 1981. Net imports of petroleum products averaged 1.0 million barrels per day, 19 percent below the annual average for 1981. The largest decline among petroleum product imports was in distillate fuel oil imports which were down 45 percent from 1981.⁹

Exports

Exports of petroleum products were about 200 thousand barrels per day, 57 percent higher during 1982 than during 1981. The growth in exports is attributable mainly to the relaxation of export restrictions. The increase was most noticeable in the residual fuel oil exports, which jumped by 94 thousand barrels per day and in exports of distillate fuel oil, which increased by 60 thousand barrels per day.¹⁰ For

*Energy Information Administration, *Cost and Quality of Fuels for Electric Utility Plants*, DOE/EIA-0191(81) (Washington, D.C., 1982) pp. 10, 14, 17.

⁴*Petroleum Supply Monthly*, (January 1983), p. G-6.

⁵*Petroleum Supply Monthly*, (June 1982), p. 8.

⁶*Petroleum Supply Monthly* (January 1983) p. 23.

⁷*Petroleum Supply Monthly* (January 1983) p. 18.

⁸*Petroleum Supply Monthly*, (January 1983) pp. 26, 27, and 32.

⁹*Petroleum Supply Monthly*, (January 1983) pp. 19, 22, and 27.

¹⁰*Monthly Energy Review* (December 1982) pp. 31, 40, and 42.

several months during the year, the United States was a net exporter of distillate fuel oil. In those months, the volume of distillate fuel oil exported exceeded the volume imported.

Crude Oil Production

Domestic crude oil production averaged approximately 8.6 million barrels per day for the fourth consecutive year. However, because of the declines in crude oil prices and demand, drilling activity, which reached an all-time high in 1981, decreased substantially during 1982.

The average number of drilling rigs operating declined from 4,520 in December 1981 to 2,896 in December 1982, a 40 percent decline.¹⁴ During 1982, 85,855 new wells were completed. This was 7,317 wells above the number completed during 1981.¹⁵

The number of seismic crews operating peaked at 744 in September 1981 and began a decline which continued through 1982. By December 1982, the number had reached 477, the lowest level since March 1980.¹⁶

Prices

Most petroleum prices declined steadily through the first 4 months of the year including: average domestic wellhead

prices of crude oil, the composite refiner acquisition costs of domestic and foreign crude oil, the average wholesale and retail prices of diesel fuel and heating oil, the average wholesale prices of residual fuel oil and the average retail price for motor gasoline. By September the average domestic wellhead price of crude oil was \$28.08 per barrel, \$3.05 below that of one year earlier,¹⁷ and the average composite refiner acquisition cost in October was about 7 percent below the cost at the end of 1981. The average retail price of motor gasoline, at \$1.27 per gallon in November, was about 6 percent below the average price in November 1981.¹⁸

The average price of residential heating oil, at \$1.20 per gallon, was about 1 percent higher than in October 1981.¹⁹

¹⁴Hughes Tool Company, *Rotary Rigs Running—By State* (December 1981-December 1982).

¹⁵American Petroleum Institute, *Report on Drilling Activity in the United States* (January 1981-December 1982).

¹⁶Society of Exploration Geologists, "SEG News Release," (January 1980-December 1982).

¹⁷*Monthly Energy Review* (December 1982) p. 80.

¹⁸Energy Information Administration, *Weekly Petroleum Status Report*, DOE/EIA-020 (83-01) (Washington, D.C.: January 21 1983), p. 17.

¹⁹*Weekly Petroleum Status Report*, (January 21, 1983), p. 17.

Trends in Petroleum Products Consumption, 1971-1982

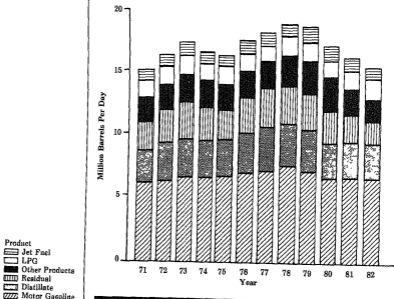
During 1982, consumption of petroleum products (measured as products supplied for domestic use) continued to decline as it has in each year since 1978. The average 1982 consumption of 15.2 million barrels per day was only slightly above the average during 1971.¹ Petroleum products consumption has varied since 1971 in reaction to crude oil and petroleum product price changes, to product availability, and to economic conditions. Petroleum product consumption increased from 1971 to 1973 as supplies were plentiful and prices were relatively low. Then, as a result of the Arab oil embargo and collective action of the Organization of Petroleum Exporting Countries (OPEC), prices of imported crude oil and petroleum products increased rapidly. These sudden price changes contributed significantly to an economic recession which ran from November 1973 through March 1975.

The recession, combined with higher prices, in turn contributed to decreases in petroleum consumption in 1974 and 1975.

Because of increased imports and stabilized prices, petroleum supplies (notably supplies of gasoline) were abundant in 1976, and average annual consumption of petroleum products jumped more than 15 percent from 1975 to 1978, when 18.8 million barrels per day were consumed, the largest amount ever. The record consumption in 1978 was again followed by shortages in 1979 and increasing world crude oil prices. The average refiner acquisition cost of imported crude oil jumped from nearly \$15

¹Energy Information Administration, *Petroleum Supply Monthly*, DOE/EIA-0109 (82/01) (Washington, D.C.: January 1983) p. 18.

Figure 4. Consumption of Major Petroleum Products: 1971 to 1982



Data Sources

The consumption data in this article are based on the State Energy Data System (SEDS), an EIA system that generates annual estimates of energy consumption by State and major end-use sectors. In the SEDS, State consumption of petroleum products is calculated by disaggregating national values using State sales or deliveries data. Complete documentation of the SEDS data sources and methodology is found in the EIA publication, *State Energy Data Report, 1960 through 1980*. This SEDS report is the source of consumption data presented in this article for the years 1971 through 1980, except where otherwise noted. The end-use sector consumption estimates for 1981 follow the SEDS methodology but use 1981 source data. Petroleum products consumption for 1982 is drawn from the products supplied information in the *Petroleum Supply Monthly*.

per barrel in December 1978 to approximately \$29 per barrel in December 1979 forcing up retail prices of petroleum products.¹ Petroleum consumers reacted to these dramatic price increases by switching to less costly fuels whenever possible and by reducing their consumption through conservation efforts. Since 1980, reduced industrial utilization, caused by the sluggish economy, combined with continued conservation and fuel switching has contributed to further declines in consumption of petroleum products.

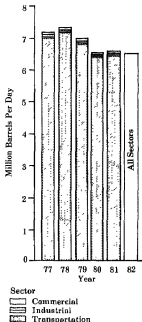
Trends in Consumption of Major Products

Since 1971, average annual consumption of motor gasoline, distillate fuel oil, and residual fuel oil combined has followed a pattern similar to that of total consumption (see Figure 4). Consumption of these products peaked in 1977 or 1978 and then declined. Consumption of residual fuel oil showed the most dramatic change over this period; it showed the greatest percentage increase among the major products and the most drastic decline. Consumption of liquefied petroleum gases (LPG) and of jet fuel, on the other hand, has been more stable during this period, showing no significant trend. Except for consumption of residual fuel oil, which was significantly lower, consumption of all of the major products during 1982 was either above or close to the amount of that product consumed in 1971.

Motor Gasoline

Motor gasoline consumption increased each year between 1971 and 1978 except 1974, the year after the Arab Oil Embargo. During 1978, motor gasoline consumption peaked at an average rate of 7.4 million barrels per day, about 23 percent higher than the 1971 level. Average annual consumption declined to 7.0 million barrels per day in 1979 and to 6.6 million barrels per day in 1980, a rate which continued through 1981 (see Figure 5). Consumption in 1982 averaged 6.5 million barrels per day, more than 12 percent below the peak consumption of 1978. However, because motor gasoline consumption remained relatively constant after 1980 while total petroleum product consumption declined, the motor gasoline portion of total consump-

Figure 5. Consumption of Motor Gasoline by End-Use Sector



tion increased to 43 percent in 1982. During most of the 1970's, motor gasoline's share ranged between 38 and 43 percent of total petroleum consumption.

During 1977, the first year that EIA collected unleaded motor gasoline data, annual consumption of unleaded motor gasoline averaged 2.0 million barrels per day, about 28 percent of all motor gasoline consumed that year. Since 1977, consumption of unleaded motor gasoline consumed that year.² Since 1977, consumption of unleaded motor gasoline has increased significantly.

¹Energy Information Administration, *Monthly Energy Review*, DOE/EIA-638(0) (Washington, D.C.: March 1980), p. 26.

²*Petroleum Supply Monthly* (January 1982), p. 26.

United States was unleaded. During 1982, unleaded gasoline consumption averaged 3.4 million barrels per day or about 52 percent of total motor gasoline consumption. The increase in consumption of unleaded motor gasoline was due to the increasing number of vehicles requiring unleaded gasoline (almost all of the automobiles currently manufactured for sale) and to the retirement of older cars which use leaded gasoline.

The fluctuations in total motor gasoline consumption are attributable in part to gasoline price increases, improved automobile efficiency, and changes in vehicle use patterns. Following the 1973 Arab Oil Embargo, when motor gasoline supplies became tight and gasoline prices increased, consumption declined slightly. By 1976, after consumers adjusted to these price increases and the supply of motor gasoline was again adequate, consumption rose as vehicle miles traveled increased. Then, in 1979, increases in the cost of imported crude oil caused gasoline prices to rise dramatically. By December 1981, the average price per gallon for all grades of gasoline was \$1.35,⁴ almost double the December 1978 price of \$0.69.⁵ Once more gasoline consumption fell as increased prices caused consumers to limit use of their vehicles. Continued improvements in fuel economy, which increased 15 percent from 1976 to 1981, also contributed to the reduction in consumption.

Distillate Fuel Oil

The pattern of distillate fuel oil consumption during the 1971-1982 period followed that of total petroleum more closely than consumption of any other major product. During 1973, annual consumption of distillate fuel oil averaged 3.1 million barrels per day, 6 percent above the 1971 average. After decreasing slightly in 1974 and 1975, it climbed to 3.4 million barrels per day in 1978, 29 percent above the average for 1971 and 11 percent above the average for 1973. Since 1978, consumption of distillate fuel oil has decreased steadily (see Figure 6). During 1982, it averaged 2.7 million barrels per day, about the same as the 1971 average and more than 22 percent below the average for 1978 when distillate fuel oil consumption peaked.⁶

Increasing prices and conservation measures have contributed to declining use of distillate fuel oil by residences

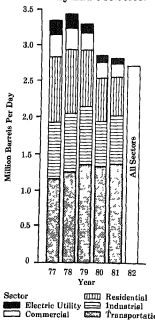
and commercial establishments (see Figures 6, 10, and 11) as their primary heating fuel. Industrial consumption has declined since 1979 because of stagnant economic conditions (see Figures 6 and 13). While these decreases were occurring, the importance of distillate fuel in the transportation sector increased (see Figures 6 and 14). The use of diesel fuel in on-highway vehicles (trucks, buses, and autos), as a low-sulfur fuel for intercoastal shipping, and as railroad fuel has offset the declines in heating and industrial market for distillate fuel oils in recent years. As a result, the distillate percentage of total consumption has remained relatively constant at about 18 percent, even though its importance in different sectors of the economy has changed.

⁴Monthly Energy Review (March 1982), p. 1.

⁵Monthly Energy Review (March 1980), p. 1.

⁶Petroleum Supply Monthly (January 1983), p. 27.

Figure 6. Consumption of Distillate Fuel Oil by End-Use Sector



Residual Fuel Oil

The trend in residual fuel oil consumption differs somewhat from that of the other major products. Annual consumption of residual fuel oil peaked in 1977 at 3.1 million barrels per day. In 1977, consumption of residual fuel oil was almost 34 percent higher than in 1971, the largest percentage gain among the major products. At the same time, its share of total petroleum product consumption was also larger—15 percent in 1971 and almost 17 percent in 1977. Since 1977, average annual consumption of residual fuel oil has declined. In 1982, consumption of residual fuel oil averaged 1.7 million barrels per day, 24 percent below the 1971 average and 46 percent below the average for 1977. The share of total petroleum consumption represented by

residual fuel oil consumption was a lower in 1982 (11 percent) than in 1971 (15 percent).

Throughout most of this 12-year period the principal consumers of residual fuel oil were electric utilities and industrial plants. Consumption of residual fuel oil by electric utilities has declined since 1977 mainly because its price has increased in relation to that of coal and natural gas. The decreased utilization of manufacturing plants stemming from the stagnant condition of the economy has resulted in decreased industrial use of residual fuel oil (see Figure 7). The portion of residual fuel oil consumed in the transportation sector, however, expanded as consumption at utilities and in industry declined. Transportation represented only 13 percent of total residual fuel oil consumption in 1977, but by 1981 it accounted for 26 percent of the total, becoming the second largest end-use of residual fuel oil.

Sector

- Electric Utility
- Commercial
- Residential
- Industrial
- Transportation

Figure 7. Consumption of Residual Fuel Oil by End-Use Sector

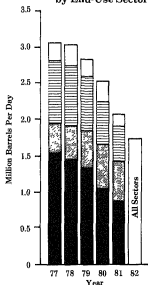
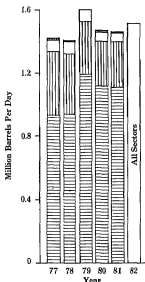


Figure 8. Consumption of Liquefied Petroleum Gases by End-Use Sector



Liquefied Petroleum Gases

Average consumption of liquefied petroleum gases (LPG) during 1982 was slightly more than 1.5 million barrels per day, an average that was higher than in any year except 1979 when consumption reached almost 1.6 million barrels per day. Except for the drop in the recession year of 1975, consumption of LPG was relatively stable at slightly more than 1.4 million barrels per day from 1972 through 1978. During 1979 and 1981, average LPG consumption was slightly less than 1.5 million barrels per day.

Increased consumption of LPG in the industrial sector has more than offset declines in usage by the other sectors since 1978. Industrial use, primarily as raw materials in chemical manufacture, accounted for 76 percent of total LPG consumption in 1981 as opposed to 66 percent in 1977 (see Figure 8).

Jet Fuels

Consumption of jet fuels remained relatively constant between 1971 and 1979, varying between slightly less than 1.1 million barrels per day in 1974 and most 1.1 million barrels per day in 1979. In 1981, the level fell to 1.0 million barrels per day.

rels per day and remained at that level through 1982. The recent drop in consumption probably reflects reductions in air traffic brought on both by the controllers strike of 1981 and the depressed economic conditions during the past 2 years.

End-Use Sector Consumption

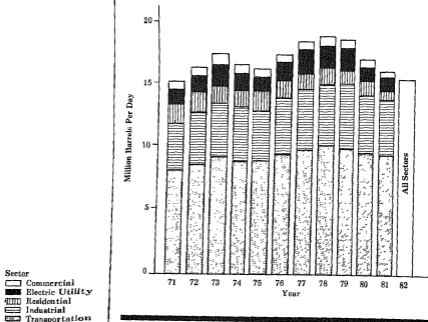
During the period from 1971 through 1981, patterns of consumption of major petroleum products changed. Two periods of major price increases were followed by reduced petroleum usage in all sectors of the economy, because of consumers' conservation efforts and their switching to other, less costly fuels. The transportation and industrial sectors consumed more petroleum in 1981 than in 1971, while the other sectors consumed less (see Figure 9).

Residential Sector

After remaining relatively stable in early 1970's at an annual average about 1.5 million barrels per day, consumption of petroleum products in residential sector declined in recent years (see Figure 10). By 1981, residential use averaged only 0.9 million barrels per day, 40 percent below the average residential consumption in 1971.

The portion of total petroleum production accounted for by the residential sector also declined during the period. In 1971, it was almost 10 percent of the total; in 1977, it was 7 percent; and, in 1981, it was only 6 percent. After 1978, when consumption of products began to decline, residential use declined at an even faster rate. In 1981, residential consumption had dropped 28 percent compared with a percent drop in total consumption.

Figure 9. Consumption of Petroleum Products by End-Use Sector: 1971 to 1981

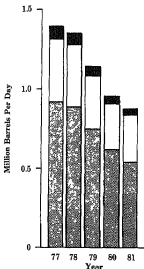


The decline in residential consumption of petroleum products can be traced primarily to fuel switching and conservation brought on by increases in the cost of fuel oil. The average retail price per gallon for residential heating oil was \$1.20 in 1981, almost triple the 1976 price of 40.6 cents.⁸ As the 1980 EIA Residential Energy Consumption Survey showed, many households have switched from heating oil to natural gas and wood.⁹

Commercial Sector

The commercial sector uses about half as much petroleum as the residential sector. Between 1971 and 1981, commercial consumption fell from 0.7 million barrels per day in 1973, to a recent low of 0.5 million barrels per day in 1981. Commercial consumption in 1981 was 8 percent of total consumption compared with 5 percent in 1971.

Figure 10. Consumption of Major Petroleum Products in the Residential Sector



Product
 ■ Other
 ■ LPG
 ■ Distillate

As with residential consumption, commercial use of petroleum products also declined as prices rose. Distillate and residual fuel oils are the principal petroleum products consumed in apartment buildings, business offices, and institutions. As the prices of petroleum products increased, commercial consumers began to switch to other fuels and to utilize conservation means to reduce expenses. In addition, economic conditions since 1981 have forced many commercial establishments to close.

Electric Utility Sector

Like petroleum consumption in the residential and commercial sectors, consumption in the electric utility sector also declined. Electric utility consumption of petroleum products peaked in 1977 at 1.7 million barrels per day, 61 percent higher than the 1.1 million barrels per day consumed in 1971 and 41 percent above the 1981 average annual consumption of 1.0 million barrels per day.¹⁰ Since 1977, the electric utility portion of total petroleum product consumption has declined as well, from about 11 percent in 1977 to 7 percent in 1981 (see Figure 12).

Price has been a primary factor in the decline in petroleum consumption at electric utilities. The significant increase in the cost of fuel oil relative to the cost of other fuels has encouraged switching to fuels other than petroleum. The EIA report, *Cost and Quality of Fuels for Electric Utility Plants*, 1981 Annual, shows that, in 1978, the cost (per Btu) of fuel oil to electric utilities was 53 percent higher than natural gas costs and almost twice the cost of coal. In 1981, the price differential had increased, and the price of fuel oil was almost twice that of natural gas and almost three and a half times the price of coal.

⁸Monthly Energy Review (March 1982), p. 8.

⁹Energy Information Administration, Residential Energy Consumption Survey, Consumption and Expenditures April 19 through March 1981, DOE/EIA-0321 (Washington, D.C.: September 1982), pp. 9.

¹⁰Monthly Energy Review (November 1981), p. 28.

Definitions of Major End-use Consuming Sectors

The State Energy Data System assigns energy consumption to five major end-use sectors according to the following guidelines:

- **Residential Sector:** Energy consumed by private household establishments primarily for space heating, water heating, air conditioning, cooking, and clothes drying.
- **Commercial Sector:** Energy consumed by non-manufacturing establishments. Included are motels, restaurants, wholesale businesses, retail stores, laundries, and other service enterprises, as well as health, social, and educational institutions, and

energy consumed by Federal, State and local government.

- **Industrial Sector:** Energy consumed by manufacturing, construction, mining, agriculture, and forestry establishments.

- **Transportation Sector:** Energy consumed to move people and commodities in both the public and private sectors. Included are military, railroad, vessel bunkering, and marine uses, as well as the pipeline transmission of natural gas.

- **Electric Utility Sector:** Energy consumed by privately- and publicly-owned establishments which generate electricity primarily for resale.

Figure 11. Consumption of Major Petroleum Products in the Commercial Sector

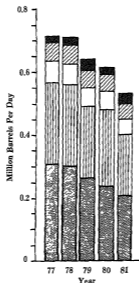
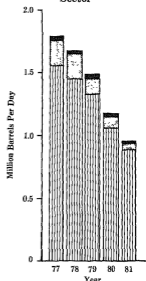


Figure 12. Consumption of Petroleum Products the Electric Utility Sector

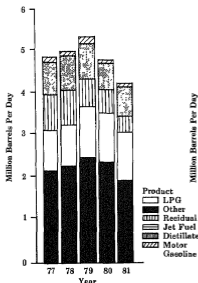


Product
 Other
 Motor Gasoline
 LPG
 Residual
 Distillate

Industrial Sector

Industrial use of petroleum products fluctuated with the economy between 1971 and 1981, but its share of total petroleum consumption changed very little (see Figures 9 and 13). During 1971, industrial consumption averaged 3.9 million barrels per day and accounted for about 25 percent of total consumption. Industrial consumption then climbed to 4.5 million barrels per day in 1973, before declining during the 1974-1975 recession. From 1976 through 1979, consumption again increased, as industrial output increased. It peaked at 5.1 million barrels per day in 1978, 33 percent above the 1971 average. Industrial consumption was lower in 1980 and again in 1981 as economic conditions deteriorated. The 1981 average of 4.1 million barrels per day was 20 percent below 1979 levels but 9 percent higher than in 1971. Industrial consumption in 1981 accounted for 28 per-

Figure 13. Consumption of Major Petroleum Products in the Industrial Sector

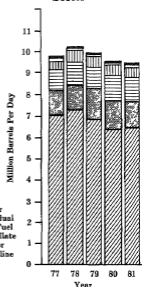


cent of total petroleum product consumption.

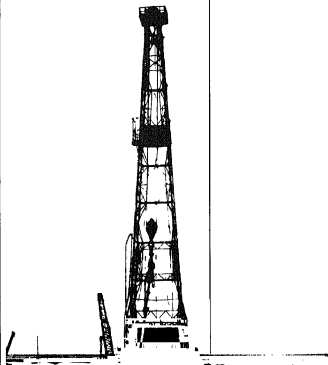
Transportation Sector

More petroleum is consumed in the transportation sector than in any other sector of the economy. It was the only economic sector in which a greater volume was consumed in 1981 than in 1971. Its share of total petroleum consumption also increased over the same period. Consumption for transportation uses averaged 9.5 million barrels per day in 1981 compared with 8.1 million barrels per day in 1971. The 1981 average, however, was 6.5 percent below the record 10.1 million barrels per day consumed in 1978. As a portion of total consumption the transportation sector accounted for 59 percent in 1981 compared with portions ranging between 52 and 55 percent in the 1970's. Transportation is expected to remain the principal consuming sector for petroleum products throughout the 1980's.

Figure 14. Consumption of Major Petroleum Products in the Transportation Sector



Summary Statistics



Crude Oil¹ and Petroleum Products Overview

		Field Production			Stock Withdrawal ²		Petroleum Products Supplied	Ending Stocks ³
		Total Domestic ⁴	Crude Oil	Natural Gas Plant Production	Crude Oil ⁵	Petroleum Products		Crude Oil ⁵ and Petroleum Products
								Millions of Barrels
Thousand Barrels per Day								
1973	AVERAGE	10,975	9,208	1,738	11	-148	17,308	1,008
1974	AVERAGE	10,498	8,774	1,686	-62	-117	18,853	1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	18,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,481	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-376	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,947	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	1,382
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	18,069	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,180	8,501	1,593	-391	-374	15,383	1,438
	June	10,287	8,629	1,564	-135	406	16,098	1,430
	July	10,098	8,500	1,548	-380	91	15,882	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,478
	October	10,225	8,569	1,598	-780	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,580	-170	745	16,598	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,257	8,689	1,548	-238	1,129	15,890	1,461
	February	10,281	8,690	1,524	-216	1,268	15,941	1,431
	March	10,212	8,557	1,570	-65	1,049	15,580	1,401
	April	10,296	8,652	1,593	107	1,594	16,048	1,350
	May	10,223	8,660	1,520	49	-34	14,848	1,348
	June	10,242	8,681	1,505	86	-615	14,591	1,362
	July	10,228	8,649	1,621	-188	-865	14,771	1,384
	August	10,301	8,701	1,643	-440	4	14,930	1,407
	September	10,306	8,733	1,613	252	-899	14,921	1,415
	October	10,283	8,676	1,540	-584	-55	14,820	1,424
	November*	10,377	8,680	1,634	R-357	R-357	R 15,031	R 1,455
	December**	NA	8,660	NA	-126	200	14,894	1,440
	AVERAGE	NA	8,671	NA	-140	238	15,291	

¹ Includes lease condensate.² A negative number indicates an increase in stocks and a positive number indicates a decrease.³ Ending stocks for 1973-1980 are totals as of December 31.⁴ Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.⁵ Includes stocks located in the Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

* See Explanatory Note 5.1.

** Italics denote preliminary data. See Explanatory Note 2.7.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Crude Oil¹ and Petroleum Products Overview (continued)

		Imports ²			Exports ³		
		Total	Crude Oil ⁴	Petroleum Products	Total	Crude Oil	Net ⁵ Imports
		Thousand Barrels per Day					
1973	AVERAGE	6,256	3,244	3,012	231	2	6,025
1974	AVERAGE	5,112	3,477	2,635	221	3	5,892
1975	AVERAGE	6,056	4,105	1,951	208	6	5,846
1976	AVERAGE	7,313	5,287	2,026	223	8	7,090
1977	AVERAGE	6,607	6,516	2,193	243	50	6,565
1978	AVERAGE	6,363	6,358	2,008	362	158	6,002
1979	AVERAGE	6,456	6,519	1,937	472	236	7,984
1980	AVERAGE	6,909	5,263	1,646	544	287	6,395
1981	January	6,827	4,932	1,895	558	338	8,270
	February	6,772	4,873	1,889	569	198	8,203
	March	6,028	4,521	1,507	588	210	5,442
	April	5,668	4,338	1,330	570	198	5,098
	May	5,775	4,287	1,489	595	312	5,180
	June	5,435	4,061	1,375	420	123	5,015
	July	5,818	4,298	1,521	571	257	5,245
	August	5,787	4,178	1,588	644	204	5,123
	September	6,365	4,740	1,624	619	194	5,845
	October	5,959	4,380	1,578	738	226	5,221
	November	5,741	4,048	1,696	701	278	5,041
	December	5,843	4,137	1,708	856	189	5,187
	AVERAGE	5,958	4,388	1,598	596	228	5,401
1982	January	5,232	3,848	1,585	829	238	4,404
	February	4,631	3,349	1,742	804	304	3,887
	March	4,461	2,858	1,606	882	321	3,579
	April	4,286	2,815	1,474	788	174	3,501
	May	4,784	3,314	1,471	803	262	3,981
	June	5,227	3,782	1,445	703	94	4,524
	July	5,763	4,245	1,518	741	229	5,022
	August	5,156	3,880	1,306	658	304	4,288
	September	5,358	3,603	1,757	791	184	4,589
	October	5,230	3,838	1,594	932	270	4,260
	November*	R 5,726	R 3,883	R 1,864	786	232	4,940
	December**	4,377	3,023	1,354	NA	NA	NA
	AVERAGE	5,026	3,486	1,560	NA	NA	NA

¹ Includes lease condensate.

² Includes shipments from United States possessions and territories.

³ Includes shipments to United States possessions and territories.

⁴ Includes crude oil for storage in the Strategic Petroleum Reserve.

⁵ Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

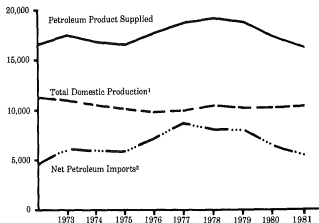
* See Explanatory Note 6.1.

** Italics denote preliminary data. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Petroleum Overview, Annual (Thousand Barrels per Day)



¹Includes crude oil and natural gas plant production.

²Includes SPR imports.

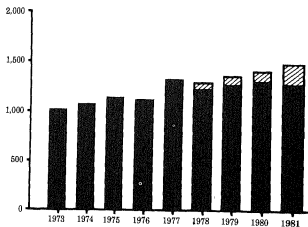
Source table: "Crude Oil and Petroleum Products Overview."

Crude Oil and Petroleum Products Ending Stocks, Annual (Millions of Barrels)

Legend

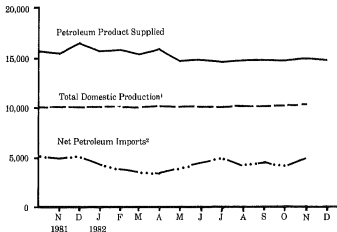
▨ SPR Crude Oil

■ Crude Oil and Petroleum Products, Excluding SPR



Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."

Petroleum Overview, Monthly (Thousand Barrels per Day)






¹Includes crude oil and natural gas plant production.

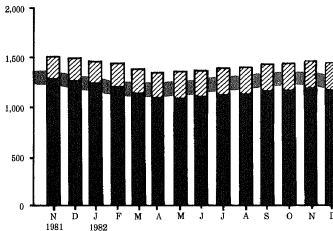
²Includes SPR imports.

Source table: "Crude Oil and Petroleum Products Overview."

Crude Oil and Petroleum Product Ending Stocks, Monthly (Millions of Barrels)

Legend

-  SPR Crude Oil
-  Crude Oil and Petroleum Products, Excluding SPR
-  Average Stock Range¹



¹Average stock range (excluding SPR) based on 3 years of data. See Explanatory Note 2.5.

Source tables: "Crude Oil and Petroleum Products Overview" and "Crude Oil Supply and Disposition."

Crude Oil¹ Supply and Disposition

		Supply						
		Field Production		Imports ²			Stock Withdrawal ³	
		Total Domestic	Alaskan	Total	SPR ⁴	Other	SPR ⁴	Other
		Thousand Barrels per Day						
1973	AVERAGE	8,208	188	3,244		3,244		11
1974	AVERAGE	8,774	199	3,477		3,477		-62
1975	AVERAGE	8,375	191	4,105		4,105		-17
1976	AVERAGE	8,132	173	5,287		5,287		-39
1977	AVERAGE	8,245	464	6,615		6,584		-180
1978	AVERAGE	8,707	1,229	6,356	21	6,185	-20	84
1979	AVERAGE	8,552	1,401	6,519	87	6,452	-163	-81
1980	AVERAGE	8,597	1,617	5,263	44	5,219	-67	-82
1981	January	8,540	1,606	4,932	106	4,826	-151	201
	February	8,604	1,619	4,873	80	4,793	-127	-150
	March	8,613	1,615	4,521	140	4,382	-155	-477
	April	8,557	1,606	4,338	272	4,066	-444	-151
	May	8,501	1,590	4,287	386	3,901	-513	122
	June	8,629	1,632	4,061	318	3,743	-434	290
	July	8,500	1,605	4,296	175	4,121	-324	-36
	August	8,583	1,602	4,175	257	3,922	-372	769
	September	8,604	1,607	4,740	435	4,305	-486	201
	October	8,583	1,586	4,300	453	3,827	-601	-259
	November	8,586	1,614	4,046	271	3,774	-256	-86
	December	8,585	1,623	4,137	165	3,971	-252	82
	AVERAGE	8,572	1,606	4,398	256	4,141	-330	46
1982	January	8,669	1,712	3,648	170	3,478	-159	-77
	February	8,690	1,715	2,949	159	2,790	-213	-3
	March	8,597	1,702	2,656	185	2,671	-235	170
	April	8,552	1,657	2,813	190	2,623	-233	341
	May	8,680	1,725	3,314	204	3,110	-178	225
	June	8,661	1,675	3,782	105	3,676	-105	191
	July	8,649	1,715	4,245	57	4,147	-97	-56
	August	8,701	1,699	3,520	206	3,611	-206	-233
	September	8,733	1,707	3,603	139	3,463	-143	395
	October	8,676	1,677	3,636	216	3,420	-216	-348
	November*	8,690	1,667	R 3,663	R 180	R 3,883	R -179	R -177
	December**	8,660	1,663	3,023	145	2,679	-129	3
	AVERAGE	8,671	1,685	3,462	167	3,299	-174	34

¹ Includes lease condensate.

² Includes shipments from United States possessions and territories.

³ A negative number indicates an increase in stocks and a positive number indicates a decrease.

⁴ Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

* See Explanatory Note 5.2.

** Italics denote preliminary data. See Explanatory Note 2.7.

Note. Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia

Sources: See "Sources" at the end of this section.

Crude Oil¹ Supply and Disposition (continued)

		Supply (Continued)		Disposition		Ending Stocks ²		
		Unac- counted for Crude Oil	Crude Used Directly and Losses	Refinery Inputs	Exports ³	Total Crude Oil	SPR ⁴	Other Primary
		Thousand Barrels per Day				Millions of Barrels		
1973	AVERAGE	3	-32	12,431	2	242		242
1974	AVERAGE	-25	-25	12,133	3	265		265
1975	AVERAGE	17	-30	12,442	6	271		271
1976	AVERAGE	77	-33	13,418	8	285		285
1977	AVERAGE	-6	-30	14,802	50	348	7	340
1978	AVERAGE	-57	-30	14,739	158	376	87	308
1979	AVERAGE	-11	-29	14,648	236	430	91	339
1980	AVERAGE	34	-28	13,481	287	486	108	369
1981	January	113	-48	13,247	339	466	112	374
	February	-41	-56	12,902	198	494	116	378
	March	154	-63	12,353	210	514	121	393
	April	51	-62	12,091	198	532	134	397
	May	255	-82	12,300	312	544	150	394
	June	49	-55	12,415	129	546	183	386
	July	147	-65	12,251	257	559	173	388
	August	16	-63	12,908	204	547	195	362
	September	-295	-65	12,595	194	555	199	353
	October	188	-66	12,057	225	579	215	354
	November	279	-68	12,240	278	589	225	368
	December	52	-67	12,349	169	594	230	363
	AVERAGE	83	-63	12,470	228			
1982	January	-138	-66	11,638	236	606	235	371
	February	199	-66	11,252	304	612	241	371
	March	278	-66	11,277	321	614	249	366
	April	58	-66	11,366	174	611	255	355
	May	105	-65	11,801	252	609	251	345
	June	110	-57	12,498	94	607	264	343
	July	1	-63	12,447	229	612	267	345
	August	140	-59	11,858	304	625	274	352
	September	-218	-59	12,128	184	616	278	340
	October	324	-53	11,760	270	635	285	351
	November*	-141	-52	R 11,741	262	R 646	R 280	R 353
	December**	NA	NA	11,772	NA	648	283	354
	AVERAGE	NA	NA	11,798	NA			

¹ Includes lease condensate.

² Ending stocks for 1973-1980 are totals as of December 31.

³ Includes shipments to United States possessions and territories.

⁴ Strategic Petroleum Reserve.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

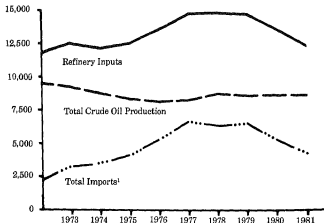
* See Explanatory Note 5.2.

** Italics denote preliminary data. See Explanatory Note 2.7.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Crude Oil Supply and Disposition, Annual (Thousand Barrels per Day)



¹Includes SPR imports.

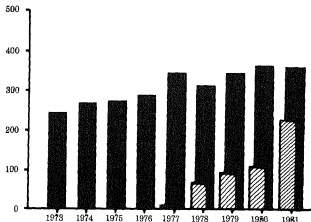
Source table: "Crude Oil Supply and Disposition."

Crude Oil Ending Stocks, Annual (Millions of Barrels)

Legend

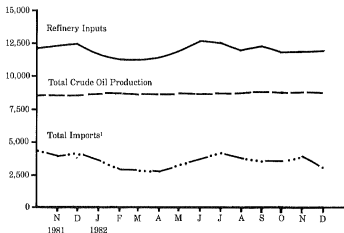
SPR

Other Primary



Source table: "Crude Oil Supply and Disposition."

Crude Oil Supply and Disposition, Monthly (Thousand Barrels per Day)



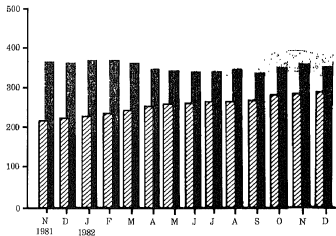
Crude Oil Ending Stocks, Monthly (Millions of Barrels)

Legend

SPR

Other Primary

Average Stock Range¹



Finished Motor Gasoline Supply and Disposition

		Supply			Disposition			Ending Stocks		
		Total Production	Imports ¹	Stock Withdrawal ^{1, 2}	Exports	Product Supplied			Total Motor Gasoline ³	Finished Motor Gasoline
						Total	Unleaded ⁴	Unleaded		
Thousand Barrels per Day								Percent of Total	Millions of Barrels	
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209	
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	218	
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235	
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231	
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	268	
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	236	
1979	AVERAGE	6,852	181	2	(*)	7,034	2,798	39.8	237	
1980	AVERAGE	6,506	140	-66	1	6,579	3,087	46.8	261	
1981	January	6,715	138	-421	(*)	6,431	3,141	48.8	276	227
	February	6,308	111	-116	1	6,301	3,065	49.1	264	230
	March	6,213	171	-81	(*)	6,303	3,067	49.1	285	232
	April	6,114	188	303	(*)	6,602	3,284	49.7	272	223
	May	6,122	150	344	1	6,815	3,115	47.1	260	213
	June	6,220	186	622	1	7,028	3,419	48.6	242	184
	July	6,405	151	268	(*)	6,823	3,424	50.2	228	186
	August	6,611	124	-85	3	6,637	3,344	50.4	233	188
	September	6,564	169	-70	2	6,662	3,338	50.1	237	191
	October	6,426	147	7	3	6,576	3,257	49.5	236	190
	November	6,564	146	-336	1	6,373	3,196	50.2	248	201
	December	6,586	197	-91	11	6,681	3,444	51.5	253	203
	AVERAGE	6,405	157	28	2	6,686	3,264	49.5		
1982	January	6,181	114	-358	18	5,920	3,033	51.2	262	214
	February	5,917	133	28	8	6,070	3,145	51.8	262	215
	March	6,004	163	469	44	6,612	3,396	51.4	248	195
	April	6,104	177	641	33	6,880	3,494	50.7	223	180
	May	6,322	163	188	23	6,650	3,415	51.3	215	174
	June	6,767	195	-136	14	6,812	3,561	52.3	220	179
	July	6,798	200	-165	24	6,799	3,574	52.6	226	183
	August	6,447	264	-80	16	6,655	3,520	52.9	226	185
	September	6,530	215	-217	22	6,507	3,365	52.0	234	191
	October	6,283	177	-25	15	6,361	3,360	52.6	234	192
	November*	R 6,273	208	91	11	R 6,559	3,446	52.6	R 230	189
	December**	6,447	NA	NA	NA	6,299	NA	NA	227	NA
	AVERAGE	6,339	NA	NA	NA	6,510	NA	NA		

¹ Beginning in 1981 excludes blending components.

² A negative number indicates an increase in stocks and a positive number indicates a decrease.

³ Includes motor gasoline blending components. Ending stocks for 1979-1980 are totals as of December 31.

⁴ Includes gasoline.

Totals may not equal sum of components due to independent rounding.

(*) = Less than 500 barrels. NA = Not available. R = Revised data.

** See Explanatory Note 5.3.

* Italics denote preliminary data. See Explanatory Note 2.7.

Notes: Beginning in January 1981, survey forms were modified. See Explanatory Note 4 on Changes for the effects on motor gasoline statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks ¹
		Total Production	Imports	Stock Withdrawals ²	Crude Used Directly	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	2,822	392	-116	2	9	3,092	196
1974	AVERAGE	2,869	299	-9	2	2	2,946	200
1975	AVERAGE	2,854	155	40	2	1	2,851	208
1976	AVERAGE	2,824	146	62	1	1	3,133	186
1977	AVERAGE	3,278	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	AVERAGE	2,662	142	84	1	3	2,866	206
1981	January	2,389	273	636	11	(³)	4,109	179
	February	2,609	325	248	11	17	3,373	173
	March	2,484	147	264	9	(³)	2,904	164
	April	2,418	116	-8	10	3	2,532	165
	May	2,454	179	-232	10	(³)	2,411	172
	June	2,501	225	-270	9	(³)	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	(³)	2,386	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	6	5	2,603	201
	November	2,716	124	36	11	8	2,880	200
	December	2,856	56	277	11	26	3,212	182
	AVERAGE	2,613	173	38	10	5	2,629	
1982	January	2,615	86	780	10	90	3,410	166
	February	2,447	130	688	11	80	3,167	147
	March	2,294	46	812	10	84	2,881	128
	April	2,357	59	631	13	84	2,886	109
	May	2,618	74	-184	10	75	2,444	114
	June	2,731	100	-335	10	55	2,450	125
	July	2,734	124	-761	11	24	2,084	148
	August	2,526	79	-346	10	40	2,228	159
	September	2,658	56	-77	12	139	2,514	161
	October	2,637	97	-290	8	66	2,586	170
	November*	R 2,863	R 141	R -514	8	24	R 2,475	R 168
	December**	2,706	147	32	NA	NA	2,790	181
	AVERAGE	2,616	86	15	NA	NA	2,667	

¹ Ending stocks for 1973 - 1980 are totals as of December 31.

² A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

(³) = Less than 500 barrels per day. NA = Not available. R = Revised data.

* See Explanatory Note 5.4.

** Italics denote preliminary data. See Explanatory Note 2.7.

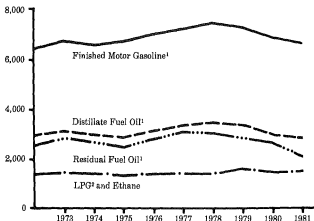
Note: Beginning in January 1981, survey forms were modified. See Explanatory Note 4 on Changes for the effects on Distillate Fuel Oil statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Products Supplied, Annual (Thousand Barrels per Day)



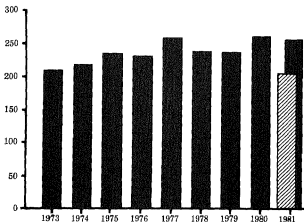
¹Figures for 1979 and 1980 recast to account for data system changes in 1981. See Explanatory Note 4.

²Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."

Motor Gasoline¹ Ending Stocks, Annual (Millions of Barrels)

Legend



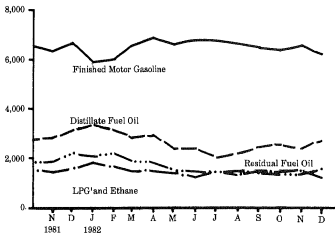
¹Includes finished motor gasoline blending components.

Source table: "Finished Motor Gasoline Supply and Disposition."

Products Supplied, Monthly (Thousand Barrels per Day)

Liquefied Petroleum Gases.

Source tables: "Finished Motor Gasoline Supply and Disposition," "Distillate Fuel Oil Supply and Disposition," "Residual Fuel Oil Supply and Disposition," "Liquefied Petroleum Gases and Ethane Supply and Disposition."



Motor Gasoline Ending Stocks, Monthly (Millions of Barrels)

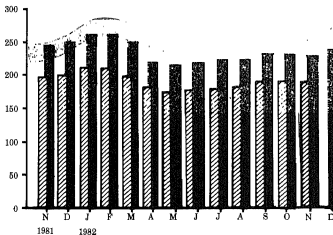
Legend

■ Total Motor Gasoline¹
 ▨ Finished Motor Gasoline
 ▩ Average Stock Range²

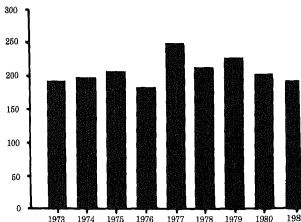
¹Includes finished motor gasoline ending components.

²Average stock range for total motor gasoline based on 3 years of data. See explanatory Note 2.5.

Source table: "Finished Motor Gasoline Supply and Disposition."

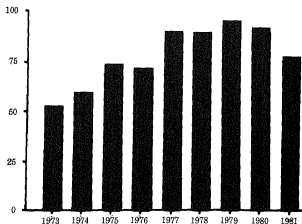


Distillate Fuel Oil Ending Stocks, Annual (Millions of Barrels)



Source table: "Distillate Fuel Oil Supply and Disposition."

Residual Fuel Oil Ending Stocks, Annual (Millions of Barrels)

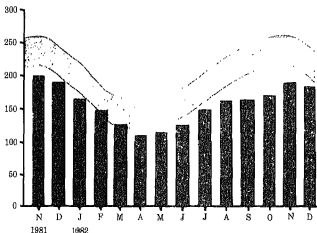


Source table: "Residual Fuel Oil Supply and Disposition."

Distillate Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

Legend

 Average Stock Range^a



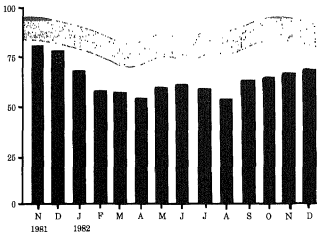
Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Distillate Fuel Oil Supply and Disposition."

Residual Fuel Oil Ending Stocks, Monthly (Millions of Barrels)

Legend

 Average Stock Range^a



Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Residual Fuel Oil Supply and Disposition."

Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks ¹
		Total Production	Imports	Stock Withdrawals ²	Crude Used Directly	Exports	Products Supplied	
		Thousands Barrels per Day						Millions of Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,630	60
1975	AVERAGE	1,235	1,223	2	15	15	2,482	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,987	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,526	96
1980	AVERAGE	1,580	839	10	12	33	2,508	92
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,866	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	630	2	48	82	1,971	69
	August	1,201	618	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,236	766	8	54	202	1,884	80
	November	1,227	660	-49	53	203	1,906	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	1,321	800	37	48	116	2,098	
1982	January	1,183	821	328	53	235	2,150	68
	February	1,136	928	358	53	213	2,261	58
	March	1,121	910	25	53	197	1,912	57
	April	1,162	762	124	52	234	1,867	54
	May	1,127	738	-175	52	191	1,551	59
	June	1,077	643	-49	59	217	1,504	61
	July	1,029	576	51	49	239	1,466	59
	August	1,007	519	200	47	235	1,539	53
	September	1,607	671	-302	44	140	1,472	62
	October	954	758	-56	43	234	1,466	64
	November*	R 980	R 843	R -35	43	182	R 1,597	R 66
	December**	1,032	559	-149	NA	NA	1,297	69
	AVERAGE	1,068	742	20	NA	NA	1,669	

¹ Ending Stocks for 1973-1980 are totals as of December 31.

² A negative number indicates an increase in stocks and a positive number indicates a decrease.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

* See Explanatory Note 5.4.

** Italics denote preliminary data. See Explanatory Note 2.7.

Notes: Beginning in January 1981, survey forms were modified.

See Explanatory Note 4 on changes for the effects on residual fuel oil statistics.

Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Liquefied Petroleum Gases and Ethane Supply and Disposition

		Supply			Disposition			Ending Stocks ¹
		Total Production	Imports	Stock Withdrawal ²	Refinery Inputs	Exports	Product Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	1,900	132	-35	220	27	1,440	99
1974	AVERAGE	1,565	123	-39	220	25	1,408	113
1975	AVERAGE	1,527	112	-35	246	26	1,333	125
1976	AVERAGE	1,535	150	24	260	25	1,404	116
1977	AVERAGE	1,568	161	-95	233	19	1,422	136
1978	AVERAGE	1,537	123	12	239	20	1,413	132
1979	AVERAGE	1,556	217	70	236	16	1,592	111
1980	AVERAGE	1,535	216	-27	233	21	1,468	120
1981	January	1,617	306	363	362	21	1,913	117
	February	1,593	327	173	303	21	1,799	112
	March	1,551	260	-4	257	20	1,530	112
	April	1,586	214	-236	231	28	1,306	119
	May	1,567	199	-258	220	19	1,279	127
	June	1,557	205	-208	237	24	1,304	133
	July	1,597	213	-258	215	17	1,220	141
	August	1,582	195	-242	235	149	1,150	149
	September	1,622	199	-75	297	21	1,436	151
	October	1,593	267	72	320	76	1,559	149
	November	1,571	260	86	363	58	1,495	146
	December	1,468	255	379	428	50	1,624	135
	AVERAGE	1,571	244	-18	289	42	1,468	
1982	January	1,546	314	480	398	67	1,373	122
	February	1,476	291	310	327	51	1,699	114
	March	1,529	223	145	289	74	1,525	109
	April	1,566	183	107	257	77	1,527	108
	May	1,553	186	-61	235	43	1,431	108
	June	1,571	192	-109	262	106	1,295	111
	July	1,556	227	-5	253	37	1,487	111
	August	1,591	125	-44	254	61	1,357	112
	September	1,506	247	33	273	85	1,528	111
	October	1,582	194	92	306	81	1,481	109
	November*	1,503	267	172	370	37	1,634	103
	AVERAGE	1,564	222	101	293	85	1,529	

1. Ending stocks for 1973 - 1980 are totals as of December 31.

2. A negative number indicates an increase in stocks and a positive number indicates a decrease.

Totals may not equal sum of components due to independent rounding

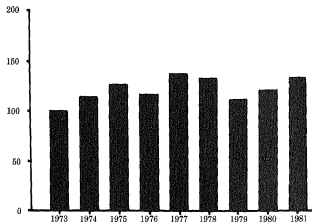
* See Explanatory Note 5.5.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage.

Geographic coverage: The 50 United States and the District of Columbia.

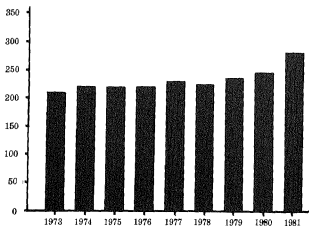
Sources: See "Sources" at the end of this section.

Liquefied Petroleum Gases and Ethane Ending Stocks, Annual
(Millions of Barrels)



Source table: "Liquefied Petroleum Gases and Ethane Supply and Disposition."

Other Petroleum Products¹ Ending Stocks, Annual
(Millions of Barrels)



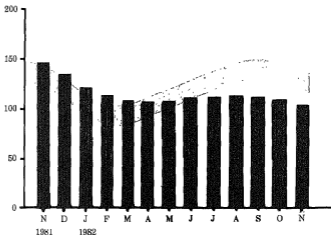
¹Includes natural gasoline and isopentane, unfinished oils, gasoline blending components, jet fuels, kerosene, lubricants, and asphalt. Some gasoline blending components not included prior to 1981.

Source table: "Other Petroleum Products Supply and Disposition."

Liquefied Petroleum Gases and Ethane Ending Stocks, Monthly (Millions of Barrels)

Legend

□ Average Stock Range¹



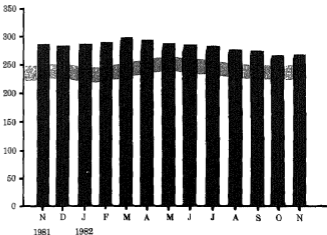
¹Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Liquefied Petroleum Gases and Ethane Supply and Disposition."

Other Petroleum Products¹ Endings Stocks, Monthly (Millions of Barrels)

Legend

□ Average Stock Range²



¹Includes natural gasoline and isopentane, unfinished oil, gasoline blending components, jet fuels, kerosene, lubricants, and asphalt.

²Average stock range based on 3 years of data. See Explanatory Note 2.5.

Source table: "Other Petroleum Products Supply and Disposition."

Other Petroleum Products¹ Supply and Disposition

		Supply			Disposition			Ending Stocks ²
		Total Production	Imports	Stock Withdrawal ³	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Millions of Barrels
1973	AVERAGE	3,593	502	-9	750	196	3,270	208
1974	AVERAGE	3,558	432	-28	685	174	3,123	218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,048	168	14	492	167	3,588	225
1979	AVERAGE	4,153	195	-37	352	206	3,748	238
1980	AVERAGE	3,858	210	-23	311	198	3,834	247
1981	January	3,821	162	80	851	132	3,081	266
	February	3,723	182	-200	538	208	2,858	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,802	229	-58	594	238	3,231	305
	June	3,825	218	-29	656	197	3,281	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	878	218	3,225	298
	September	5,718	285	215	583	176	3,159	291
	October	5,603	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,738	226	48	723	199	3,088	
1982	January	3,181	240	-102	602	180	2,538	284
	February	3,364	260	-116	646	138	2,724	287
	March	3,485	241	-204	734	161	2,827	294
	April	3,294	287	81	801	204	2,767	291
	May	3,296	309	198	829	210	2,769	285
	June	3,481	315	115	815	216	2,879	281
	July	3,578	391	15	862	187	2,935	281
	August	3,519	329	256	841	202	3,080	273
	September	3,442	365	74	767	213	2,901	271
	October	3,472	367	223	801	268	2,988	264
	November ⁴	3,464	406	-12	824	269	2,766	264
	AVERAGE	3,425	319	50	784	205	2,808	

¹ Includes natural gasoline and kerosene, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil.

² Ending Stocks for 1973-1980 are totals as of December 31.

³ A negative number indicates an increase in stocks and a positive number indicates a decrease. Totals may not equal sum of components due to independent rounding.

⁴ See Explanatory Note 5.8.

Note: Annual stock changes for 1975 and 1981 were calculated using expanded survey coverage. Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Crude Oil and Petroleum Product Imports from OPEC Sources

	Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC ¹	Total OPEC	Total Arab OPEC ²
	Thousand Barrels per Day										
1973											
AVERAGE	138	164	488	71	213	223	489	1,135	106	2,993	915
1974											
AVERAGE	180	4	481	74	300	469	713	979	88	3,289	752
1975											
AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,383
1976											
AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977											
AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,186
1978											
AVERAGE	849	854	1,144	385	573	555	918	645	226	6,751	2,983
1979											
AVERAGE	635	658	1,355	261	420	304	1,080	690	212	5,637	3,058
1980											
AVERAGE	488	654	1,261	172	348	9	857	481	130	4,300	2,551
1981											
January	341	500	1,264	93	424	0	908	546	27	4,127	2,210
February	381	468	1,122	93	406	0	886	463	82	3,861	2,084
March	352	485	1,027	47	326	0	771	380	54	3,425	1,912
April	263	465	1,034	88	307	0	812	237	39	3,245	1,887
May	393	443	933	17	287	0	864	331	124	3,203	1,786
June	358	390	885	60	367	0	828	248	118	2,922	1,703
July	333	251	1,073	80	340	0	851	486	38	3,233	1,757
August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
September	336	164	1,477	98	371	0	323	359	148	3,264	2,053
October	242	147	1,342	90	427	0	412	389	172	3,220	1,620
November	210	132	1,270	112	353	0	517	535	86	3,184	1,724
December	176	122	1,045	150	400	0	884	411	132	3,126	1,502
AVERAGE	311	319	1,129	91	366	0	620	406	98	3,323	1,848
1982											
January	254	161	977	87	273	0	852	378	128	2,818	1,378
February	139	92	692	79	236	0	679	347	102	2,267	1,044
March	91	37	555	155	200	0	503	399	81	2,032	860
April	86	0	479	122	215	0	427	411	75	1,618	707
May	179	0	601	116	236	0	211	414	64	1,811	897
June	93	0	593	94	215	72	537	361	110	2,076	799
July	122	0	644	123	327	69	910	349	95	2,840	927
August	170	0	489	135	272	27	542	288	134	2,057	807
September	162	0	452	67	191	21	479	514	82	1,907	856
October	249	7	494	61	227	108	291	496	86	2,029	810
November	247	13	488	47	283	34	480	539	115	2,246	785
AVERAGE	183	28	577	98	243	30	511	408	98	2,156	880

¹ Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

² Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Crude Oil and Petroleum Product Imports from Non-OPEC Sources

	Bahamas	Canada	Mexico	Netherlands Antilles	Trinidad and Tobago	United Kingdom	Puerto Rico ¹	Virgin Islands ¹	Other ²	Total
Thousand Barrels per Day										
1973										
AVERAGE	174	1,325	16	585	265	15	89	328	485	3,263
1974										
AVERAGE	164	1,076	8	511	251	8	90	381	340	2,632
1975										
AVERAGE	152	848	71	332	242	14	90	406	300	2,454
1976										
AVERAGE	118	599	87	275	274	31	88	422	353	2,247
1977										
AVERAGE	171	517	179	211	289	128	106	488	550	2,614
1978										
AVERAGE	160	487	319	229	253	190	84	429	494	2,613
1979										
AVERAGE	147	539	439	231	190	202	82	431	648	2,819
1980										
AVERAGE	78	455	533	225	176	178	88	388	491	2,609
1981										
January	39	543	401	198	150	233	89	494	652	2,701
February	84	546	437	227	183	271	46	481	628	2,881
March	74	472	488	227	93	263	45	370	571	2,803
April	68	412	418	186	139	402	40	365	380	2,423
May	122	385	522	213	105	368	58	344	474	2,573
June	51	383	538	196	124	397	67	282	525	2,513
July	77	382	384	212	178	553	50	208	541	2,583
August	69	378	488	285	123	582	88	184	539	2,898
September	111	429	708	183	169	525	72	285	861	3,100
October	63	449	669	161	121	351	60	303	592	2,739
November	63	547	608	168	108	253	78	284	421	2,357
December	70	501	587	148	125	280	73	367	583	2,714
AVERAGE	74	447	522	197	133	376	62	327	834	2,672
1982										
January	28	509	426	179	106	346	62	334	425	2,415
February	50	533	489	221	120	132	38	354	487	2,424
March	43	435	503	189	118	293	62	307	479	2,428
April	87	357	467	180	186	247	36	288	682	2,488
May	76	416	767	152	85	516	47	302	803	2,974
June	32	462	797	141	128	539	58	322	673	3,150
July	30	527	793	168	111	433	36	389	674	3,122
August	88	435	854	145	108	620	24	320	827	3,099
September	92	484	897	185	88	831	51	270	744	3,453
October	45	456	882	148	108	688	52	282	783	3,502
November	48	547	860	203	30	623	81	334	694	3,460
AVERAGE	53	489	585	173	113	452	50	313	628	2,931

¹ U.S. Possessions.

² Includes all Non-OPEC countries except those shown above.

Totals may not equal sum of components due to independent rounding.

Note: Beginning in October 1977, Strategic Petroleum Reserve imports are included.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

Sources

- 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, "Petroleum Statement, Annual" and PAD Districts Supply/Demand, Annual," Mineral Industry Surveys.
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Monthly Petroleum Statistics Report," (unleaded gasoline category).
- 1977 through 1980: Energy Information Administration, U.S. Department of Energy, "Petroleum Statement, Annual" and "PAD Districts Supply/Demand, Annual," "Energy Data Reports.
- January 1981 through December 1981: Energy Information Administration, U.S. Department of Energy, "Petroleum Supply Annual."
- January 1982 through November 1982: Detailed statistics in this issue. (See Explanatory Notes 5.1 through 5.6).
- December 1982: Estimates based on EIA weekly data (except domestic crude oil production). See Explanatory Note 2.2).
- January 1982 through December 1982: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies and the U.S. Geological Survey. (See Explanatory Note 2.7).

**Detailed
Statistics**





Table 1. U.S. Petroleum Balance, November 1982

	Current Month		Year-to-Date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
Crude Oil (Including Lease Condensate)				
Field Production				
(1) Alaska	E 49,956	1,567	E 567,215	1,869
(2) Lower 48 States	E 210,715	7,024	E 2,329,247	6,974
(3) Total U.S.	E 260,710	8,590	E 2,896,512	8,572
Net Imports				
(4) Imports (Gross Excluding SPR)	110,480	3,655	1,115,082	3,359
(5) SPR Imports	—	—	58,252	168
(6) Exports	7,659	242	80,309	240
(7) Imports (Net Including SPR)	102,819	3,201	1,091,135	3,267
Other Sources				
(8) SPR Withdrawal (+) or Addition (-)	-6,371	-179	-59,522	-179
(9) Other Stock Withdrawal (+) or Addition (-)	-6,325	-177	7,437	22
(10) Used Directly and Losses	-1,560	-32	-20,507	-62
(11) Unaccounted for	-4,239	-141	25,623	80
(12) Total Other Sources	-18,495	-530	-48,189	-128
(13) Crude Input to Refineries	252,292	11,741	2,841,478	11,801
Natural Gas Plant Liquids (NGPL)				
Field Production				
(14) Imports	46,017	1,534	518,391	1,546
(15) Stock Withdrawal (+) or Addition (-)	1,179	39	7,223	23
(16) Total NGPL Supply	-946	-32	3,134	9
(17) Other Liquids	49,230	1,640	527,048	1,576
Unrefined Cile and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-)	3,242	108	8,857	27
(19) Imports	8,730	224	56,271	166
(20) Other Hydrocarbons and Alcohol New Supply (Field Production)	1,595	53	17,981	53
(21) Refinery Processing Gain	17,122	571	174,032	521
(22) Crude Used Directly	1,513	50	10,739	58
(23) Total Other Liquids	30,202	1,007	276,699	828
(24) Total Production of Products	431,534	14,388	4,745,225	14,207
Net Imports of Refined Products				
(25) Imports (Gross)	48,005	1,600	483,519	1,389
(26) Exports	15,723	524	170,546	511
(27) Imports (Net)	32,277	1,076	272,971	817
(28) Total New Supply of Products	460,911	16,464	5,018,196	15,025
(29) Refined Products Stock Withdrawal (+) or Addition (-)	-12,969	-432	91,887	208
(30) Total Petroleum Products Supplied for Domestic Use	450,942	16,031	5,095,883	15,230
Exports				
(31) Finished Motor Gasoline	198,783	6,559	2,183,254	6,537
(32) Naptha-Type Jet Fuel	8,348	212	89,102	207
(33) Kerosene-Type Jet Fuel	25,078	836	285,448	796
(34) Kerosene	4,190	140	40,285	123
(35) Distillate Fuel Oil	74,248	2,475	884,301	2,640
(36) Residual Fuel Oil	47,913	1,597	588,937	1,703
(37) Liquefied Petroleum Gases and Ethane	49,058	1,604	504,241	1,522
(38) Other	54,373	1,812	655,451	2,001
(39) Total Refined Exports	320,693	10,625	3,757,019	10,946
(40) Total Product Supplied	450,942	16,031	5,095,883	15,230
Ending Stocks, All Oils				
(41) Crude Oil and Lease Condensate (Excluding SPR)	356,027	—	356,627	—
(42) Strategic Petroleum Reserve (SPR)	289,903	—	289,903	—
(43) Unrefined Oils	111,879	—	111,579	—
(44) Gasoline Blending Components	41,243	—	41,243	—
(45) Natural Gasoline and Unfractionated Stream	12,385	—	12,385	—
(46) Finished Refined Products	543,858	—	543,858	—
(47) Total Stocks	1,465,155	—	1,465,155	—

1 A balancing item.

2 Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.

3 For products included see Explanatory Note 5.7.

E = Estimated.

— Not Applicable.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2, and 5.7.

Table 3. Year-to-Date Supply and Disposition Statistics of Crude Oil and Petroleum Products, January - November 1982
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply		Crude Used Directly and Losses ¹	Disposition		Ending Stocks
				Imports	Stock Withdrawn (+) or Added (-)		Refinery Inputs	Exports	
Crude Oil (including lease condensate)									
E 2,996,512	0	0	1,771,444	-52,135	26,323	-20,807	3,941,478	98,308	0
Natural Gas Plant Liquids and Liquefied Petroleum Gas	511,544	90,654	81,527	34,318	0	0	170,131	21,457	116,852
Unrefined Gasoline and Gasolines	68,208	0	5,914	3,067	0	0	59,413	0	6,326
Unrefined Diesel	154	0	0	198	0	0	0	0	4,414
Plant Condensate	11,348	0	1,710	-71	0	0	12,832	0	1,645
Liquefied Petroleum Gases and Ethane	431,603	90,654	74,304	31,184	0	0	97,770	21,957	103,467
Ethane	92,112	1,418	16,488	-491	0	0	1,344	0	3,006
Propane	185,369	21,260	17,682	7,682	0	0	10,382	1	250,578
Butane	79,798	4,410	7,928	3,410	0	0	57,136	0	33,113
Petroleum Refinery Feedstocks	1,415	7,415	8,065	367	0	0	1,415	0	13,982
Enthalpy-Propene Mixtures	74,190	0	9,871	6,790	0	0	45	0	9,054
Isobutane	36,519	14	0	-812	0	0	36,078	0	9,350
Other Hydrocarbons	17,681	0	56,271	8,837	0	0	189,691	0	152,922
Other Hydrocarbons and Alcohol	17,681	0	0	-3	0	0	17,678	0	211
Unrefined Oil	0	0	43,235	-331	0	0	113,034	0	11,678
Motor Gasoline Blending Components	0	0	13,036	0,851	0	0	59,446	0	-37,559
Aviation Gasoline Blending Components	0	0	0	340	0	0	-557	0	697
Finished Petroleum Products	4,819	4,384,548	389,215	37,593	0	19,793	0	162,691	540,391
Finished Motor Gasoline	545	2,113,257	62,351	14,107	0	0	0	5,967	2,183,354
Finished Diesel	523	1,003,652	39,689	12,497	0	0	0	0	95,078
Finished Unleaded Motor Gasoline	23	1,109,101	22,662	1,892	0	0	0	0	1,133,470
Gasohol	0	1,094	0	0	0	0	0	0	0
Finished Aviation Gasoline	662	7,896	2	213	0	0	0	0	1,092
Naphtha-Type Jet Fuel	0	66,775	1,682	1,019	0	0	0	0	2,323
Nonkerosene-Type Jet Fuel	2	280,280	7,771	-307	0	0	0	0	6,035
Domestic Fuel Oil	26	871,125	30,455	5,949	0	3,434	0	1,694	34,508
Residual Fuel Oil	0	357,698	253,510	11,551	0	16,384	0	22,689	181,592
Naphtha < 400 Deg. for Petro. Feed.	0	50,686	16,742	469	0	0	0	1,317	6,000
Other Oil > 400 Deg. for Petro. Feedstock	843	17,190	6,635	504	0	0	0	6,589	21,787
Special Naphtha	0	46,012	3,302	1,656	0	0	0	1,727	3,450
Lubricants	0	48,012	0	-444	0	0	0	5,573	12,648
Waxes	0	4,686	432	-84	0	0	0	281	4,003
Petroleum Coke	0	130,000	0	-2,191	0	0	0	90,516	83,301
Asphalt	0	112,056	1,571	5,486	0	0	0	265	11,938
Bitumens	0	601	0	-28	0	0	0	0	54
Spill Gas	0	155,438	0	0	0	0	0	0	184,148
Miscellaneous Products	2,733	26,468	617	76	0	0	0	424	2,704
Total	3,439,586	4,475,352	1,996,757	28,483	26,823	-1,909	4,391,210	270,857	1,455,155

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

3 Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

* Average monthly supply and disposition of crude oil and petroleum products, November 1982
(Thousand Barrels per Day)

Commodity	Field Production	Refinery Production	Supply			Crude Used Directly and Losses ²	Disposition	
			Imports	Stock Withdrawal (+) (-)	Unaccounted For (+) (-)		Refinery Inputs	Exports
Crude Oil (including lease condensate)								
	8,690	0	3,953	-357	-141	-82	11,741	262
Natural Gas Plant Liquids and Lites								
Natural Gasoline and Isopentane	1,624	259	306	139	0	0	574	37
Unfractionated Steam	218	0	53	0	0	0	170	0
Plant Condensate	31	0	0	-36	0	0	0	81
Liquid Petroleum Gases and Ethane	31	0	7	-4	0	0	0	0
Ethane	1,343	259	267	172	0	0	34	0
Propane	290	2	42	-6	0	0	370	27
Butane	454	262	102	127	0	0	1	(9)
Isobutane	210	-6	63	96	0	0	4	16
Butane-Propene Mixtures	4	2	39	-1	0	0	246	22
Ethane-Propene Mixtures	379	0	20	-43	0	0	12	0
Isobutane	106	-1	0	-1	0	0	0	256
Other Liquids								
Other Hydrocarbons and Alcohol	53	0	294	106	0	0	105	0
Unfinished Oils	53	0	0	-1	0	0	620	0
Motor Gasoline Blending Components	0	0	164	85	0	0	59	0
Aviation Gasoline Blending Components	0	0	61	33	0	0	401	0
Aviation Gasoline	0	0	0	1	0	0	168	0
Finished Petroleum Products								
Finished Motor Gasoline	10	13,246	1,333	-684	0	50	0	487
Finished Leaded Motor Gasoline	2	6,271	206	51	0	0	0	11
Finished Unleaded Motor Gasoline	2	3,025	123	-31	0	0	0	0
Gasohol	(9)	3,229	83	122	0	0	0	11
Finished Aviation Gasoline	0	3	0	(9)	0	0	0	0
Marine-Type Jet Fuel	2	22	(9)	-10	0	0	0	0
Kerosene-Type Jet Fuel	0	209	0	12	0	0	0	3
Kerosene	(9)	817	29	(9)	0	0	0	14
Distillate Fuel Oil	(9)	144	29	(9)	0	0	0	0
Residual Fuel Oil	(9)	2,893	141	-37	0	0	0	9
Naphtha < 400 Deg. for Petro. Feed Use	0	989	843	-14	0	0	0	(9)
Other Oils > 400 Deg. for Petro. Feed Use	0	132	19	-82	0	43	0	24
Special Naphthas	0	225	0	-6	0	0	0	162
Lubricants	2	42	28	(9)	0	0	0	2
Waxes	0	148	25	11	0	0	0	17
Petroleum Coke	0	15	3	(9)	0	0	0	1
Asphalt	0	424	0	-38	0	0	0	13
Crack Oil	0	323	6	-32	0	0	0	1
Still Gas	0	1	0	(9)	0	0	0	224
Miscellaneous Products	4	528	0	0	0	0	0	(9)
		61	(9)	5	0	0	0	0
Total	10,377	13,505	5,726	-714	-141	-2	12,934	785
								13,031

1 Unaccounted for crude oil is a balancing item.
2 Total equals refinery inputs.

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery feed and loss.

(9) Less than 500 barrels per day.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Source and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - November 1982
(Thousand Barrels per Day)

Commodity	Field Production	Refinery Production	Supply			Crude Used Directly and Losses ¹	Unaccounted For Crude Oil ²	Refinery Inputs	Disposition	
			Imports	Stock Withdrawal ³	Drawal ⁴				Exports	Products Supplied
Crude Oil (including lease condensate)	8,472	0	3,987	-198	0	-82	89	11,871	240	0
Natural Gas Plant Liquids and Lighter	1,532	271	245	103	0	0	0	569	65	1,576
Natural Gasoline and Isopentane	304	0	17	9	0	0	0	178	0	33
Unrefined Condensate	(5) 34	0	5	(9)	0	0	0	(3)	0	(1)
Liquid Petroleum Gases and Ethane	1,203	271	222	93	0	0	0	293	65	1,522
Ethane	276	4	47	-1	0	0	0	321	4	321
Propane	461	252	64	32	0	0	0	171	34	795
Butane-Propene Mixtures	263	11	24	1	0	0	0	0	0	193
Butane-Propene Mixtures	4	0	0	0	0	0	0	0	0	0
Isobutane	222	0	30	20	0	0	0	(5)	0	272
Isobutane	110	(5)	0	-2	0	0	0	108	0	(5)
Other Liquids	53	0	168	27	0	0	9	568	0	-320
Other Hydrocarbons and Alcohol	53	0	0	(5)	0	0	0	53	0	0
Unrefined Oil	0	0	129	-1	0	0	0	338	0	-210
Motor Gasoline Blending Components	0	0	39	26	0	0	0	178	0	-112
Automotive Gasoline Blending Components	0	0	0	1	0	0	0	-2	0	3
Finished Petroleum Products	15	13,128	1,165	112	0	59	0	605	13,974	13,974
Finished Motor Gasoline	2	6,327	187	42	0	0	0	0	21	6,327
Finished Landed Motor Gasoline	2	3,003	119	37	0	0	0	0	21	3,140
Finished Unleaded Motor Gasoline	(5) 1	3,321	68	5	0	0	0	0	0	3,394
Gasoline	2	3	0	(5)	0	0	0	0	0	3
Finished Aviation Gasoline	2	20	(5)	1	0	0	0	0	0	26
Aviation Type Jet Fuel	0	270	23	-1	0	0	0	0	1	287
Kerosene	(5) 1	112	12	-1	0	0	0	23	0	130
Diesel Fuel Oil	(5) 1	2,699	91	18	0	10	0	0	3	2,800
Residual Fuel Oil	0	1,072	750	35	0	40	0	0	68	1,703
Naphtas < 400 Deg. for Petro. Feed Use	0	162	50	1	0	0	0	0	4	189
Other Oils > 400 Deg. for Petro. Feed Use	0	266	0	-1	0	0	0	0	20	245
Special Naphtas	0	15	30	0	0	0	0	0	0	45
Waxes	0	144	14	5	0	0	0	0	11	142
Waxes	0	14	1	(5)	0	0	0	0	0	14
Petroleum Coke	0	407	0	-7	0	0	0	0	151	249
Asphalt	0	235	5	16	0	0	0	0	1	256
Road Oil	0	2	(5)	0	0	0	0	0	0	2
Still Gas	0	655	0	0	0	0	0	0	0	555
Macrolutaneous Products	8	70	2	(5)	0	0	0	0	1	88
Total	10,271	13,399	5,085	85	0	-3	89	12,876	811	15,230

1 Unaccounted for crude oil is a balancing item.

2 Total refinery and lease losses.

(5) Less than 500 barrels per day.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Source and estimation procedures. See Explanatory Notes on Data Collection and Estimation.

Table 6. Production and Disposition of Crude Oil and Petroleum Products, November 1957
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Stocks Withdrawal (+) / Additions (-)	Supply	Crude Used for Chude Oil	Crude Inventory and Losses	Net Receipts	Refinery Inputs	Exports	Products Shipped	Ending Stocks
Crude Oil (including lease condensate)	6,261	0	32,039	-387	-917	0	2,059	35,435	0	0	0	16,724
Natural Gas Plant Liquids and LPGs	958	1,165	729	-17	0	0	2,631	220	0	0	5,225	5,443
Liquefied Petroleum Gases	444	1,185	540	-6	0	0	2,581	205	40	40	4,517	5,401
Other Products	185	0	0	0	0	0	0	0	0	0	292	310
Other Liquids	0	0	148	0	0	0	0	15	0	0	0	37
Other Hydrocarbons and Alcohol	86	0	2,534	-229	0	0	943	2,253	0	0	1,089	18,840
Unrefined Oil	0	0	0	0	0	0	0	102	0	0	15	15
Crude Oil Blending Components	0	0	1,763	182	0	0	953	3,293	0	0	-385	14,635
Asphaltic Blending Components	0	0	741	-129	0	0	-1,158	-1,158	0	0	1,448	4,280
Finished Petroleum Products	44	36,848	34,529	-21,324	0	0	84,369	0	0	101	135,954	212,021
Finished Motor Gasoline	44	15,591	4,976	-1,201	0	0	45,148	0	0	0	64,557	51,158
Finished Aviation Gasoline	44	7,130	2,740	-1,203	0	0	53,111	0	0	0	30,011	20,780
Finished Aviation Gasoline	0	9,471	2,236	-983	0	0	26,670	0	0	0	35,531	32,379
Naphtia-Type Jet Fuel	0	12	0	-5	0	0	158	0	0	0	-5	7
Kerosene	0	452	0	-189	0	0	543	0	0	0	-20	515
Diesel Fuel Oil	0	579	851	-540	0	0	10,442	0	0	0	11,242	10,370
Other Fuel Oil	0	202	1,011	-1,311	0	0	2,223	0	0	0	1,254	5,764
Other Petroleum Products	0	10,268	3,731	-12,683	0	0	29,335	0	0	1	33,805	88,591
Feedstocks for Petrochemicals	0	4,050	22,769	-3,565	0	0	2,869	0	0	1	25,003	35,589
Special Naphthalene	0	358	67	-95	0	0	49	0	0	47	352	198
Lubricants	0	-112	286	-216	0	0	203	0	0	5	342	180
Waxes	0	522	717	-216	0	0	300	0	0	107	1,348	3,172
Petroleum Coke	0	95	52	2	0	0	13	0	0	5	158	173
Residuum	0	1,167	0	-248	0	0	390	0	0	3	836	1,174
Slit Gas	0	2,321	129	-341	0	0	0	0	0	4	2,491	3,768
Miscellaneous Products	0	1,629	0	0	0	0	0	0	0	0	1,563	0
Total	3,720	40,015	93,901	-21,986	-917	0	90,572	37,918	231	143,252	255,636	

1. Unaccounted for crude oil is a balancing item.
2. Year totals refinery fuel use and loss include refinery stocks.

Note: Total may not equal sum of components due to independent rounding
Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation

Table 7. PAD District II Supply and Disposition of Crude Oil and Petroleum Products, November 1982
(Thousands of Barrels)

Commodity	Supply				Disposition						
	Field Production	Refinery Production	Imports	Stock Withdrawal or Addition (1)	Unaccounted For Crude Oil (2)	Crude Used Directly and Losses (3)	Net Receipts	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	8 312 299	0	16 872	-3 583	32 374	-9	1 574	78 320	1 207	0	77 244
Natural Gas Plant Liquids and LRGs	9 401	2 922	5 056	851	0	0	4 244	5 554	8	15 062	31 450
Liquid Petroleum Gases	8 203	2 005	3 801	2 652	0	0	5 009	4 217	8	15 195	28 335
Ethane	17	2 566	1 256	-433	0	0	0	0	0	3 436	1 760
Other Products (4)	-1 198	0	0	-1 318	0	0	1 235	1 367	0	-2 646	4 355
Other Liquids	148	0	583	713	0	0	749	2 444	0	-671	26 321
Refinery Gases and Alcohol (5)	148	0	0	-35	0	0	0	110	0	0	85
Lighter Gasoline Blending Components	0	0	237	327	0	0	0	686	0	-109	19 981
Aviation Gasoline Blending Components	0	0	332	456	0	0	749	2 010	0	-493	8 139
Aviation Gasoline Blending Components	0	0	0	38	0	0	0	38	0	0	104
Finished Petroleum Products	13	69 825	724	822	0	0	16 321	0	621	159 064	127 763
Finished Motor Gasoline	0	48 853	2	2 530	0	0	12 514	0	51	63 666	55 853
Finished Landed Motor Gasoline	0	25 458	0	552	0	0	6 437	0	51	32 436	28 761
Gasoline	0	25 458	0	1 822	0	0	6 077	0	0	31 406	28 039
Gasoline	0	20	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	0	100	0	-60	0	0	121	0	0	161	957
Naphtha-Type Jet Fuel	0	822	0	-33	0	0	159	0	0	1 278	1 378
Kerosene-Type Jet Fuel	0	3 654	0	-3	0	0	1 530	0	0	5 181	7 075
Kerosene	0	790	0	160	0	0	146	0	0	1 036	2 795
Diesel Fuel Oil	1	20 757	0	-1 071	0	0	3 649	0	0	22 402	48 257
Heating Fuel Oil	0	2 990	514	78	0	0	-483	0	0	2 802	4 996
Naphtha and Other Oils for Pulp Pulp	0	1 200	32	0	0	0	1 521	0	35	1 551	552
Other Petroleum Products	0	320	82	-39	0	0	196	0	0	1 551	552
Special Naphthas	0	764	0	-33	0	0	320	0	12	805	1 806
Lubricants	0	42	3	-4	0	0	0	0	0	41	66
Waxes	0	3 614	0	-245	0	0	0	0	0	2 827	2 003
Petroleum Coke	0	3 243	9	-540	0	0	107	0	1	2 519	4 771
Asphalt	0	3	0	0	0	0	0	0	0	3	20
Fluid Oil	0	5 115	0	0	0	0	0	0	0	3 115	0
Still Gas	0	137	0	2	0	0	76	0	0	225	122
Miscellaneous Products	12	137	0	2	0	0	76	0	0	225	122
Total	43 861	91 847	25 235	-1 137	32 374	-9	24 888	87 746	1 838	134 475	265 276

1. Unaccounted for crude oil is a balancing item.

2. Total equals refinery fuel use and loss.

3. Includes naphtha gasoline, kerosene, unrefined gasoline, and plant condensate.

(4) Less than 500 barrels.

5. Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. PAD District IV Supply and Disposition of Crude Oil and Petroleum Products, November 1982
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Stocks Withdrawn (+) or Added (-) (b)	Crude Used Directly and in Losses ²	Nat Receipts	Disposition		
							Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 17,267	0	1,738	-1,092	-4,868	0	12,837	0	0
Natural Gas Plant Liquids and LRGs	2,278	113	622	-48	0	0	578	0	1,948
Liquefied Petroleum Gases	493	113	870	-53	0	0	435	0	1,075
Ethane	9	0	0	(b)	0	0	0	0	6
Other Products	1,377	0	52	-65	0	0	143	0	865
Other Liquids	39	0	0	-123	0	0	-319	0	235
Other Hydrocarbons and Alcohol	39	0	0	0	0	0	39	0	0
Unfinished Oils	0	0	0	115	0	0	-244	0	359
Motor Gasoline Blending Components	0	0	0	-239	0	0	-114	0	-124
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	43	13,390	1	-474	0	0	180	3	12,302
Finished Motor Gasoline	28	7,094	0	-482	0	0	205	0	6,794
Finished Leaded Motor Gasoline	24	4,539	0	-402	0	0	-151	0	4,000
Finished Unleaded Motor Gasoline	3	2,492	0	-80	0	0	356	0	2,781
Catalytic	0	3	0	0	0	0	0	0	3
Finished Aviation Gasoline	0	20	0	2	0	0	9	0	31
Naphtha-Type Jet Fuel	0	446	0	-47	0	0	-192	0	207
Kerosene-Type Jet Fuel	0	531	0	-14	0	0	578	0	822
Kerosene	0	79	0	5	0	0	0	0	84
Distillate Fuel Oil	0	3,409	(b)	40	0	0	-420	0	3,020
Residual Fuel Oil	0	383	0	32	0	0	0	0	353
Specialty Fuel Oils for Petro. Field	0	0	0	0	0	0	0	(b)	0
Special Naphthas	0	2	1	2	0	0	0	0	5
Lubricants	0	9	0	14	0	0	0	(b)	23
Waxes	0	21	0	-6	0	0	0	0	15
Petroleum Coke	0	259	0	-52	0	0	0	(b)	247
Asphalt	0	577	0	-171	0	0	0	1	405
Fluid Oil	0	0	0	3	0	0	0	0	3
Sol Gas	0	473	0	0	0	0	0	0	473
Miscellaneous Products	15	27	0	(b)	0	0	0	(b)	43
Total	19,447	13,393	2,361	-1,877	-4,868	0	13,596	2	15,020
									31,157

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

3 Includes natural gasoline, asphaltenes, unrefined stream, and plant condensate.

(b) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. PAD District III Supply and Disposition of Crude Oil and Petroleum Products, November 1962
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Stock Withdrawn or Added, Net ¹	Unaccounted For Crude Oil ²	Crude Used Directly and Losses ³	Net Receipts	Disposition			Ending Stocks
								Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	5 136,252	0	57,457	-11,431	-23,881	-14	18,289	184,842	0	0	454,162
Natural Gas Plant Liquids and LPGs	35,491	3,335	2,145	3,352	0	0	-4,525	9,501	928	27,270	75,547
Liquefied Petroleum Gases	21,080	3,525	1,167	2,103	0	0	-4,657	5,100	886	17,471	64,296
Ethane	5,400	20	0	187	0	0	0	0	0	34	3,646
Other Products ⁴	7,702	0	978	382	0	0	-869	4,367	0	0	7,605
Other Liquids	817	0	3,467	3,296	0	0	-1,712	11,134	0	-4,326	66,670
Unblended Gasoline and Alcohol	817	0	0	0	0	0	0	825	0	0	108
Unblended Kerosene	0	0	2,893	831	0	0	-863	6,423	0	-3,812	48,909
Mix Gasoline Blending Components	0	0	0	1,162	0	0	-749	3,981	0	-2,504	17,444
Aviation Gasoline Blending Components	0	0	0	-10	0	0	0	-36	0	80	209
Finished Petroleum Products	267	189,022	2,882	3,491	0	1	-107,171	0	2,239	81,295	193,547
Finished Motor Gasoline	0	88,387	(9)	2,088	0	0	-59,701	0	260	59,574	48,046
Finished Landed Motor Gasoline	0	40,775	(9)	209	0	0	-27,727	0	293	12,977	24,474
Unfinished Motor Gasoline	0	46,091	0	2,479	0	0	-31,974	0	0	16,596	23,572
Gasoline	85	329	0	-10	0	0	0	0	0	0	0
Finished Aviation Gasoline	0	329	0	0	0	0	-289	0	0	0	0
Aviation Gasoline	0	2,521	0	499	0	0	-40	0	0	0	0
Kerosene-Type Jet Fuel	0	13,365	0	694	0	0	-12,778	0	0	0	0
Kerosene	2	3,058	0	-35	0	0	-45	0	0	0	0
Distillate Fuel Oil	1	40,791	330	160	0	0	-1,369	0	0	2,141	2,546
Residual Fuel Oil	0	13,494	1,698	-558	0	1	-25,682	0	304	1,637	1,182
Heating and Other Oils for Petro. Field	0	8,596	359	-115	0	0	-2,851	0	2,127	9,614	30,858
Specialty Oils	60	1,635	433	80	0	0	-80	0	509	8,235	16,141
Lubricants	0	2,459	28	-2	0	0	-309	0	35	1,754	3,037
Waxes	0	228	19	-12	0	0	-832	0	219	1,983	6,149
Petroleum Coke	0	4,771	0	-12	0	0	-13	0	0	456	0
Asphalt	0	0	0	0	0	0	0	0	3,485	1,285	862
Feedstocks	0	2,510	57	5	0	0	-407	0	0	2,178	3,077
Residuum	0	0	0	1	0	0	6	0	0	0	1
Sol Gas	0	7,326	0	0	0	0	0	0	0	7,326	1,002
Miscellaneous Products	89	1,723	0	173	0	0	-867	0	15	1,003	0
Total	162,467	199,257	65,862	-2,262	-23,881	-13	-69,149	185,277	9,154	103,148	73,633

1 Unaccounted for crude oil is a balancing item.

2 Total equals refinery fuel use and loss.

3 Includes natural gasoline, isopentane, unrefined stream, and plant condensate.

4 Less than 200 barrels.

5 Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV Supply and Disposition of Crude Oil and Petroleum Products, November 1962
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply With Drawal (+) or Addition (-)	Crude Used Directly and Losses ²	Net Receipts	Disposition		
							Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 17,037	0	1,738	-1,592	-4,889	0	12,837	0	0
Natural Gas Plant Liquids and URGs	2,278	113	622	-88	0	-389	578	0	1,948
Liquefied Petroleum Gases	893	113	570	-33	0	-33	435	0	1,075
Ethane	0	0	0	(*)	0	0	0	0	8
Other Products ³	1,377	0	52	-35	0	-366	143	0	865
Other Liquids	39	0	0	-123	0	-119	0	0	235
Other Hydrocarbons and Alcohol	39	0	0	0	0	0	39	0	0
Unrefined Oil	0	0	0	115	0	0	-244	0	2,733
Motor Gasoline Blending Components	0	0	0	-238	0	0	-114	0	1,886
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	43	13,280	1	-674	0	180	0	2	12,636
Finished Motor Gasoline	28	7,334	0	-402	0	256	0	0	5,794
Finished Landed Motor Gasoline	24	4,339	0	-402	0	-161	0	0	3,276
Finished Unrefined Motor Gasoline	0	2,442	0	-80	0	386	0	0	2,781
Gasoline	0	3	0	0	0	0	0	0	3
Finished Aviation Gasoline	0	23	0	2	0	2	0	0	31
Naphtha-Type Jet Fuel	0	446	0	-47	0	-182	0	0	207
Kerosene-Type Jet Fuel	0	531	0	-14	0	678	0	0	1,295
Kerosene	0	75	0	5	0	0	0	0	84
Distillate Fuel Oil	0	3,409	(*)	40	0	-420	0	0	3,029
Residual Fuel Oil	0	333	0	32	0	0	0	0	393
Naphtha and Other Oils for Petro. Feed	0	0	0	0	0	0	0	(*)	0
Special Naphtha	0	2	1	2	0	0	0	0	5
Lighter Ends	0	2	0	0	0	0	0	0	23
Jet Fuels	0	21	0	14	0	0	0	0	69
Petroleum Coke	0	259	0	-52	0	0	0	(*)	15
Asphalt	0	577	0	-171	0	0	0	(*)	405
Road Oil	0	0	0	3	0	0	0	0	3
Bit Gas	0	473	0	0	0	0	0	0	473
Miscellaneous Products	15	27	0	(*)	0	0	0	(*)	43
Total	19,447	13,393	2,361	-1,977	-4,889	-219	11,066	2	15,039
									31,157

1 Unaccounted for crude oil is a balancing item.

2 Total equals net refinery fuel use and loss.

3 Total equals net refinery fuel use and loss.

4 Includes refinery gas, separator, unrefined stream, and plant condensate.

5 Less than 500 barrels.

6 Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 10. PAD District V Supply and Disposition of Crude Oil and Petroleum Products, November 1982
(Thousands of Barrels)

Commodity	Field Production	Refinery Production	Imports	Supply Shortage (+) or Excess (-)	Unaccounted For Crude Oil	Crude Used Directly and in Losses ²	Net Receipts	Refinery Inputs	Exports	Producers Supplied	Ending Stocks
Crude Oil (including lease condensate)	83,421	0	5,781	5,807	-6,928	-1,529	-13,952	55,946	5,652	0	82,475
Natural Gas Plant Liquids and Liquids	915	939	627	63	0	0	0	1,309	141	1,071	2,081
Liquefied Petroleum Gases	275	259	627	58	0	0	0	1,152	94	944	2,005
Ethane	0	0	0	0	0	0	0	0	0	0	0
Other Products	340	0	0	4	0	0	0	227	0	117	56
Other Liquids	493	0	235	515	0	0	0	2,658	0	-1,424	31,472
Jetrefined Oil	40	0	0	5	0	0	0	1,049	0	-1,052	0
Motor Gasoline Blending Components	0	0	0	364	0	0	0	1,862	0	-1,862	0
Aviation Gasoline Blending Components	0	0	235	154	0	0	0	268	0	-106	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	2	0	-2	58
Finished Petroleum Products	0	85,407	1,703	-410	0	1,504	3,701	0	6,568	65,399	62,247
Finished Motor Gasoline	0	55,725	1,215	209	0	0	1,234	0	0	13,960	13,960
Finished Unleaded Motor Gasoline	0	12,263	282	129	0	0	1,240	0	12	14,072	14,072
Finished Unleaded Motor Gasoline	0	15,726	282	32	0	0	294	0	0	15,922	15,922
Finished Aviation Gasoline	0	64	0	0	0	0	0	0	0	63	6
Naphtha-Type Jet Fuel	0	1,652	0	-41	0	0	325	0	0	153	605
Kerosene-Type Jet Fuel	0	6,877	0	-210	0	0	0	0	0	1,770	1,445
Kerosene	0	1,559	0	-109	0	0	258	0	0	152	5,554
Residual Fuel Oil	0	10,598	169	-1,676	0	0	674	0	0	9,722	11,272
Residual Fuel Oil	0	9,065	337	3,168	0	253	475	0	0	9,010	8,412
Naphtha and Other Oils for Petro. Field	0	990	22	-17	0	1,277	-10	0	3,346	584	688
Special Naphtha	0	43	16	88	0	0	102	0	0	145	196
Lubricants	0	647	5	283	0	0	0	0	0	1,086	1,191
Waxes	0	3,423	0	10	0	0	0	0	0	2,705	2,705
Petroleum Coke	0	954	0	-305	0	0	0	0	0	432	45
Asphalt	0	21	0	-4	0	0	0	0	0	1,591	1,591
Silt Gas	0	3,275	0	0	0	0	0	0	0	15	30
Miscellaneous Products	0	109	0	-12	0	0	-10	0	0	3,275	315
Total	84,827	87,346	8,407	5,575	-6,928	-25	-16,201	63,995	13,380	66,046	170,365

1 Unaccounted for crude oil is a balancing item

2 Total equals refinery fuel use and loss.

(a) Includes natural gasoline, isopentanes, unrefined steam, and plant condensate

(b) Less than 500 barrels

(c) Total

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Current Month, September 1982 (Thousands of Barrels)

	PAD District and State		Production	
	Total	Daily Average		
PAD District I				
Florida	2,008	67		
New York	E 69	2		
Pennsylvania	E 508	10		
Virginia	0	0		
West Virginia	E 285	10		
Total	E 2,668	89		
PAD District II				
Illinois	2,445	82		
Indiana	E 18	13		
Kansas	5,085	200		
Kentucky	E 538	18		
Michigan	2,669	88		
Missouri	E 10	1		
Nebraska	556	19		
North Dakota	4,069	136		
Ohio	E 1,114	37		
Oklahoma	19,882	456		
South Dakota	86	3		
Tennessee	110	4		
Total	E 31,674	1,256		
PAD District III				
Alabama	1,549	52		
Arkansas	E 1,549	52		
Louisiana	34,749	1,158		
Gulf Coast	2,951	28		
Rust Of State	37,700	1,257		
Total Louisiana	2,675	89		
Mississippi	482	16		
New Mexico	5,334	178		
Northwestern	5,816	194		
Southeastern	2,119	71		
Total New Mexico	3,187	106		
Texas	10,386	280		
THRC District 01	2,283	78		
THRC District 02	2,283	78		
THRC District 03	3,448	115		
THRC District 04	2,716	81		
THRC District 05	2,716	81		
THRC District 06	2,716	81		
THRC District 07	2,716	81		
THRC District 08	18,859	582		
THRC District 09	19,360	645		
THRC District 10	3,126	104		
THRC District 11	1,707	57		
THRC District 12	4,315	144		
THRC District 13	76,081	2,536		
Total Texas	E 125,370	4,179		

† Includes offshore production

Sources: San Explanatory Notes on Data Collection and Estimation

E Estimated

PAD District and State		Production
		Daily Average
PAD District IV		
Colorado	2,426	81
Montana	2,541	85
Utah	E 1,949	65
Wyoming	E 8,863	329
Total	E 15,779	559
PAD District V		
Alaska	3,273	76
South Alaska	40,078	1,639
North Slope	51,148	1,705
Total Alaska	20	1
Arizona	6,366	212
California	25,437	881
Central Coastal	5,802	223
East Central	33,471	1,116
North Central	45	2
South Central	84,653	2,823
Total California	E 20,184	8,706
Nevada	2	0
Total		
United States Total		

Table 12. Offshore Production of Crude Oil (Including Lease Condensate) By State, for the Most Current Month,¹ September 1982
(Thousands of Barrels)

State	Offshore Production	
	Total	Daily Average
Alaska ²	2,023	67
California	2,623	81
Federal	3,281	109
State	5,704	190
Louisiana	32,437	748
Federal	1,377	68
State	24,414	814
Texas	1,457	49
Federal	250	8
State	1,206	50
United States Total	33,737	1,125

¹ These production data are included in Table 11.

² All offshore production when State boundaries

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 13. Production of Lease Condensate by State, for the Most Current Month,¹ September 1982
(Thousands of Barrels)

State	Lease Condensate Production	
	Total	Daily Average
Alabama	903	30
California	10	(0)
Mississippi	5,320	177
New Mexico	154	5
Oklahoma	284	10
Texas	961	32
Total	3,407	114
Total	11,029	268

¹ These production data are included in Table 11. Small amounts of lease condensate are known to be produced in states other than those listed; however, statistics on this production are not available.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 14. Natural Gas Processing Plant Production of Petroleum Products by PAD District,¹ November 1982
(Thousands of Barrels)

Commodity	PAD District I			PAD District II			PAD District III					PAD District IV West Coast	Unfed States				
	East Coast	Appalachian Grn Coast, Ill.	Total	Ind. Ill.	Wisc. Ky.	Okla. Minn.	Texas Inland	Texas Gulf Coast	No. La. Ark.	New Mexico	Total						
Natural Gas Plant Liquids	560	367	928	(*)	1,381	449	7,670	9,401	10,523	2,758	8,050	828	4,031	35,191	2,278	913	48,710
Isopentane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	28	32	64	(*)	925	85	-3,703	-2,769	9,704	-10,485	626	183	2,714	2,732	928	358	5,900
Unfractionated Stream	29	35	64	(*)	0	0	28	67	239	613	22	-68	1	806	66	0	940
Liquid Petroleum Gases and Ethane	443	300	743	0	867	288	9,465	10,089	7,414	12,328	6,099	577	1,070	27,468	921	573	40,305
Ethane	144	155	299	0	382	0	2,214	2,596	918	2,675	2,072	50	84	5,800	9	0	8,703
Propane	176	98	274	0	351	188	3,188	3,684	2,695	3,343	2,020	174	530	8,761	960	336	13,016
Butane	99	31	130	0	54	89	1,288	1,430	1,170	1,575	773	199	212	4,239	324	184	6,248
Ethane-Propane Mixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ethane-Propane Mixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane	23	16	39	0	45	0	2,291	2,296	1,356	3,351	599	0	171	6,078	8	0	8,373
Finished Motor Gasoline	44	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Leaded Motor Gasoline	44	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Unleaded Motor Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gasohol	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene-Type Jet Fuel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Special Naphthas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microfines Products	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Production	604	367	971	(*)	1,383	449	7,682	9,414	10,711	2,761	8,052	838	4,036	35,398	2,321	913	49,917

¹ Production represents quantity of natural gas processing plant output less input to fractionating facilities.

(*) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 13. Refinery Input of Crude Oil and Petroleum Products by PAD District, November 1982
(Thousands of Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II				PAD District III				Total	New Mexico	Rocky Mountain	West Coast	United States
	East Coast	Appalachian	Total	Ind. IL, Ky.	Whic. Mo.	Ill. Mo.	Ohio, Pa.	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.	Pa. Dist. IV					
Crude Oil (including lease condensate)	33,596	1,829	35,425	1,673	48,341	7,939	21,378	78,330	13,172	84,196	60,161	4,306	2,304	164,642	12,837	58,936
Natural Gas Plant Liquids																
Ethane	15	0	15	0	278	253	722	806	2,150	383	109	84	84	3,544	70	227
Propane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Normal Butane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Butanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pentanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hexanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heptanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Octanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Decanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Undecanes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dodecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tridecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tetradecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pentadecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hexadecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heptadecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Octadecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nonadecane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Eicosane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	104	16	120	66	755	42	385	328	210	811	98	22	1,479	55	363	3,185
Other Liquids																
Alcohols	102	0	102	0	110	0	0	130	16	507	223	0	0	526	38	487
Aldehydes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ketones	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Esters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acids	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gases	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solids	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	110	0	110	0	110	0	0	130	16	507	223	0	0	526	38	487
Unrefined Oil (avg)	3,113	180	3,293	53	245	38	351	695	787	2,507	2,915	69	145	6,423	-244	1,682
Motor Gasoline (avg)	-1,092	-44	-1,136	-8	1,832	3	213	2,010	327	1,636	2,137	-68	-41	3,981	-114	288
Aviation Gasoline Blending Components (avg)	4	0	4	0	49	0	-5	38	-75	-4	-17	0	0	-86	0	2
Total Input to Refineries	35,827	1,981	37,808	1,682	53,354	8,710	23,822	87,748	15,855	92,587	67,980	5,279	2,566	183,277	13,098	63,985
Crude Oil Distillation																
Gross Input (daily average)	1,145	63	1,208	62	1,050	285	719	2,717	485	2,937	2,058	169	86	5,735	433	2,084
Gross Output (daily average)	1,544	98	1,642	60	2,302	295	885	3,608	822	4,301	2,755	267	107	8,002	589	3,150
Operating Ratio (percent)¹	69.6	64.0	89.3	84.4	59.9	96.6	81.3	75.3	78.0	68.3	74.7	63.4	80.1	71.2	73.6	66.6
Crude Oil Qualities																
API Gravity, Weighted Average	1.04	.19	.59	.75	.81	1.65	.54	.88	.93	.80	1.36	.38	.91	.90	1.04	.93
API Gravity, Weighted Average	30.91	41.70	51.51	35.50	35.10	30.85	37.22	35.25	36.36	34.36	33.46	33.83	30.08	34.41	34.86	35.79

1. Increases gross input divided by operable capacity.
Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Extension

Table 16. Refinery Production of Petroleum Products by PAD District, November 1982
(Thousands of Barrels)

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV				PAD District V			
	East Coast	Appalachian	Total	Appalachian	Ind., Ky.	West. Del.	Miss.	Texas Inland	Texas Coast	Gulf Coast	La. Coast	No. Ark.	New Mexico	Total	Rocky Mts.	West Coast	Unad. States			
Liquid Petroleum Gases and Ethane	1,165	0	1,165	35	1,312	238	437	2,022	251	1,866	1,255	66	97	3,235	113	939	29,008			
For Petrochemical Feedstock Use	281	0	281	0	141	0	46	187	0	796	236	0	36	1,076	0	159	1,674			
For Other Uses	904	0	904	35	1,171	238	391	1,835	251	1,070	1,019	58	61	2,459	123	780	6,100			
Ethane	0	0	0	0	17	0	0	17	0	10	10	0	0	20	0	10	47			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20			
For Other Uses	0	0	0	0	17	0	0	17	0	10	10	0	0	20	0	10	27			
Propane	1,058	0	1,058	35	1,352	238	527	2,152	211	1,817	1,438	50	47	3,553	102	918	7,871			
For Petrochemical Feedstock Use	226	0	226	0	141	0	46	187	0	573	168	0	0	711	0	154	1,318			
For Other Uses	832	0	832	35	1,211	238	481	1,965	211	1,244	1,270	50	47	2,842	102	764	6,553			
Butane	109	0	109	0	57	0	0	167	0	273	463	14	36	330	0	48	350			
For Petrochemical Feedstock Use	26	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26			
For Other Uses	84	0	84	0	57	0	0	167	0	273	463	14	36	330	0	48	324			
Butane-Propane Mixtures	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Petrochemical Feedstock Use	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
For Other Uses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Isobutane	0	0	0	0	0</															

Table 18. Refinery Receipts of Crude Oil by PAD District, November 1982
(Thousands of Barrels)

Method	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V			United States
	East Coast	West Coast	Total	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	
Pipeline																
Domestic	0	1,294	1,294	1,080	32,244	4,172	10,061	57,560	11,499	48,513	30,321	3,276	2,020	96,558	10,188	28,883
Foreign	0	0	0	181	13,538	3,575	1,428	18,822	737	7,517	4,288	175	0	12,728	1,801	773
Tanker																
Domestic	3,042	0	3,042	0	0	0	0	0	0	5,561	4,832	0	0	10,383	0	33,013
Foreign	25,541	0	25,541	0	742	0	742	0	16,907	17,335	0	0	0	34,242	0	8,282
Barge																
Domestic	0	37	37	0	969	0	969	0	5,285	4,059	32	0	0	9,376	0	288
Foreign	4,281	0	4,281	0	888	0	888	0	0	55	788	0	0	841	0	6,008
Tank Cars																
Domestic	69	349	417	0	0	0	0	0	0	0	0	0	19	0	0	436
Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trucks																
Domestic	0	361	361	0	289	38	858	1,165	661	189	441	966	335	2,584	847	1,378
Foreign	0	0	0	0	0	0	0	0	171	0	0	0	0	171	0	171
Total	3,110	1,981	5,091	1,583	33,482	4,210	20,419	59,894	12,160	60,538	38,653	4,295	2,325	118,871	11,045	63,542
Domestic	30,822	0	30,822	181	15,256	3,575	1,428	20,250	908	24,424	27,609	961	0	47,582	1,801	9,865
Foreign	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	110,220

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 19. Fuels Consumed at Refineries by PAD District, November 1982
(Thousands of Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V			United States
	East Coast	West Coast	Total	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	Appalachian	Ind. No.	Chas. No.	
Crude Oil (including lease condensate)	0	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquid Petroleum Gases ¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unrefined Oil	864	13	876	0	3	0	0	0	0	0	0	0	0	0	0	889
Residual Fuel Oil	689	52	741	20	319	84	3	429	5	174	86	19	0	288	274	315
Marketable Petroleum Coke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Crude Petroleum Coke	702	11	713	27	707	68	221	1,024	196	1,231	769	25	11	2,182	145	809
Sulfur	1,378	66	1,443	66	1,821	286	814	2,950	377	3,740	2,068	181	46	6,365	432	3,068
Other Fuels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Oil (million cubic feet)	1,791	301	2,092	89	4,349	124	3,318	7,835	2,478	21,475	8,778	862	146	33,729	1,111	7,117
Coal (thousand short tons)	0	13	13	0	0	0	0	0	0	0	0	0	0	0	0	13
Purchased Electricity (million kWh)	234	28	262	13	367	46	571	997	77	372	395	22	21	579	123	820
Purchased Steam (million pounds)	611	6	617	0	96	0	0	96	0	0	0	0	0	597	0	817

¹ Includes liquefied refinery gases.

² Includes small quantities of other petroleum products (e.g., unfinished oil, kerosene, etc.) consumed at refineries.

³ Less than 500 barrels except where noted.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 20. Imports of Crude Oil and Petroleum Products by PAD District, November 1982
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate):¹ 2	32,029	16,872	57,447	1,738	5,781	115,978
Natural Gas Liquids						
Natural Gasoline and Isopentane	729	5,056	2,145	622	637	9,190
Plant Condensate	0	0	978	0	0	978
Liquefied Petroleum Gases and Ethane						
Ethane	144	0	0	0	0	144
Propane	1580	5,066	1,167	570	627	8,201
Butane	10	0	0	0	0	10
Bulane	387	2,256	0	208	0	2,851
Bulane-Propene Mixtures	214	883	0	262	507	1,866
Ethane-Propene Mixtures	(4)	1,161	0	0	0	1,161
Other Liquids:¹	0	609	0	0	0	609
Unrefined Oil: ¹	2,564	943	3,407	0	236	6,730
Motor Gasoline Blending Components	1,763	280	2,893	0	0	4,937
Other	741	332	914	0	236	1,823
Finished Petroleum Products	34,629	374	2,862	1	1,763	39,999
Finished Motor Gasoline	4,976	2	(4)	0	1,215	6,194
Finished Unleaded Motor Gasoline	2,740	2	(4)	0	963	3,694
Finished Aviation Gasoline	2,236	0	0	0	252	2,500
Napalm Type Jet Fuel	(4)	0	0	0	0	(4)
Kerosene Type Jet Fuel	861	0	0	0	0	861
Bonded Aircraft Fuel	0	0	0	0	0	0
Other	801	0	0	0	0	801
Kerosene	1,511	0	0	0	0	1,511
Distillate Fuel Oil	3,731	0	320	(4)	169	4,226
Bonded ships bunkers	0	0	0	0	0	0
For military offshore use	0	0	0	0	0	0
No. 2 fuel oil	3,731	(4)	330	(4)	169	4,226
Fuel oil	0	0	0	0	0	0
Residual Fuel Oil	22,780	514	1,656	0	337	25,287
Bonded ships bunkers	0	0	0	0	0	0
For military offshore use	0	0	0	0	0	0
Other	22,780	514	1,656	0	337	25,287
Naphtha < 400 Deg. for Petro. Feed. Use	67	99	350	0	32	558
Other Oil > 400 Deg. for Petro. Feed. Use	0	0	0	0	0	0
Special Naphtha	296	62	430	1	15	828
Lubricants	711	28	0	0	1	751
Wax	63	2	50	0	5	78
Asphalt	125	2	0	0	0	132
Miscellaneous Products	1	0	0	0	0	1
Total Imports	69,901	25,235	65,882	2,361	8,407	171,786

¹ Crude oil and unfinished oils are reported by the PAD District in which they are to be processed, all other products are reported by the PAD District of entry.

² Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(4) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, November 1982
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unrefined Oil	Gasoline Blending Components	Refined Motor Gasoline	Jet Fuel	Kerosene	Dist. Fuel Oil	Resid. Fuel Oil	Special Naphtha	Other Products 2	Total Production	Total Petroleum	Total Crude (Quality Average)
All PAD Districts														
Arab OPEC														
Algeria	4,583	0	0	0	0	0	196	0	2,505	0	0	2,703	7,308	247
Libya	0	0	0	0	0	0	0	0	378	0	0	378	378	13
Saudi Arabia	13,569	0	0	236	0	0	0	0	0	0	837	1,073	14,062	489
United Arab Emirates	1,414	0	0	0	0	0	0	0	0	0	0	1,414	47	47
Subtotal Arab OPEC	19,565	0	0	236	0	0	196	0	2,883	0	837	4,154	23,650	795
Other OPEC														
Ecuador	699	0	0	0	0	0	0	0	169	0	0	169	858	30
Gabon	2,556	0	0	0	0	0	0	0	0	0	0	0	2,556	85
Indonesia	7,904	470	0	0	80	0	0	1	30	0	0	531	8,435	283
Iran	1,023	0	0	0	0	0	0	0	0	0	0	0	1,023	34
Nigeria	14,205	0	0	0	0	0	0	0	182	1	0	183	14,387	480
Venezuela	63	532	532	839	268	0	451	422	6,211	467	445	8,794	16,182	539
Subtotal Other OPEC	32,765	533	532	535	335	0	451	423	6,612	467	445	10,737	43,522	1,451
Other														
Australia	1,305	0	0	0	0	0	0	0	0	0	0	0	1,305	44
Bahamas	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	1,210	0	882	0	0	0	241	0	231	0	0	1,450	1,450	48
Canada	217	0	0	0	0	0	0	0	1,343	0	0	1,343	2,796	93
France	7,382	6,251	290	303	28	0	8	421	608	143	451	9,034	16,415	547
Germany	1,948	0	0	0	0	0	0	0	0	0	0	0	1,948	65
Ghana	0	0	0	0	0	0	0	0	0	0	0	0	0	0
India	25,025	98	0	0	0	0	0	0	150	0	0	150	25,175	8
Mexico	0	0	0	0	0	0	0	0	21	0	0	21	724	560
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands Antilles	0	0	978	0	0	0	0	0	4,892	0	0	5,102	5,102	203
Norway	1,767	0	0	0	0	0	0	0	0	0	0	0	1,767	89
Oman	432	0	0	0	0	0	0	0	0	0	0	0	432	14
People's Republic of China	591	0	0	0	0	0	0	11	0	0	0	982	1,583	53
Peru	388	0	0	0	0	0	0	0	481	0	0	481	870	29
Puerto Rico	0	0	478	0	1,006	0	0	0	0	0	997	2,421	2,421	81
United Arab Emirates	2,290	0	0	0	0	0	0	0	468	0	0	468	1,110	93
United Kingdom	13,207	185	0	116	0	0	0	0	218	0	25	47	15,505	893
Virgin Islands	0	0	1,178	0	2,043	422	551	2,037	3,795	0	0	10,016	10,016	334
Zaire	371	0	0	0	0	0	0	0	0	0	0	0	371	12
Other Western Hemisphere														
Honduras	139	0	0	26	0	0	0	319	1,830	75	0	2,051	2,190	73
Other Eastern Hemisphere	2,140	0	609	178	591	0	0	80	1,987	57	0	3,583	5,733	191
Subtotal Other	68,396	7,467	602	5,855	663	663	560	3,687	15,932	360	1,476	61,018	104,414	3,480
Total Imports	115,976	8,001	4,307	1,823	6,194	861	1,011	4,259	25,297	828	2,759	55,939	171,706	5,706

See footnote at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, November 1982
(Thousands of Barrels)

Source	LPG and Ethane	Unrefined Oil	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Diesel Fuel Oil	Residual Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total Petroleum	Total (Daily Average)
PAD District I													
Arab OPEC													
Algeria	1,984	0	0	0	0	130	0	2,523	0	0	2,702	4,885	188
Libya	0	0	0	0	0	0	0	378	0	0	378	378	19
Saudi Arabia	4,284	0	0	0	0	0	0	0	0	20	20	4,304	143
Subtotal Arab OPEC	6,268	0	0	0	0	198	0	2,881	0	20	3,100	9,367	312
Other OPEC													
Equador	348	0	0	0	0	0	0	189	0	0	189	538	10
Gabon	1,400	0	0	0	0	0	0	0	0	0	0	1,400	67
Indonesia	2,072	0	0	0	0	0	0	0	0	0	0	2,072	59
Nigeria	4,783	0	0	0	0	0	0	0	0	0	0	4,783	158
Venezuela	2,701	63	532	447	258	0	451	5,076	251	97	6,438	11,198	373
Subtotal Other OPEC	11,231	83	532	447	258	0	451	6,165	251	97	6,937	13,937	665
Other													
Angola	1,305	0	0	0	0	0	0	0	0	0	0	1,305	44
Australia	0	0	0	0	0	0	0	0	0	0	0	0	(4)
Belgium	0	0	0	0	0	0	0	0	0	0	0	0	(4)
Brunei	364	0	0	0	0	241	0	231	0	0	231	568	19
Canada	0	352	0	0	243	0	0	1,343	0	0	1,343	1,563	65
France	0	0	0	1	26	0	8	354	273	282	1,370	1,370	46
Ghana	0	0	0	0	0	0	0	0	0	0	0	0	(4)
Mexico	3,969	0	0	0	0	0	0	150	0	0	150	150	5
Netherlands	0	0	0	0	0	0	0	0	0	0	0	3,899	133
Netherlands Antilles	0	0	0	0	733	0	0	688	0	0	688	1,420	47
Norway	500	0	0	0	0	0	0	4,962	0	0	4,962	6,102	203
Panama	389	0	0	0	0	0	0	0	0	0	0	500	17
Puerto Rico	0	0	253	0	0	0	0	481	0	0	481	870	29
Trinidad and Tobago	435	0	0	0	1,005	0	0	0	0	712	1,970	1,970	66
United Kingdom	136	0	0	116	0	0	0	215	0	0	215	435	14
Virgin Islands	0	0	0	0	2,043	422	551	2,007	3,705	20	4,718	7,072	236
Zaire	371	0	0	0	0	0	0	0	0	0	0	8,838	295
Other Western Hemisphere													
Honduras	0	0	0	0	0	0	0	1,347	0	0	1,347	1,347	46
Other Western Hemisphere	583	0	176	437	0	0	0	1,181	(4)	(4)	1,181	2,327	78
Subtotal Other	14,520	517	1,231	234	4,718	863	560	3,308	35	1,014	26,075	40,966	1,353
Total Imports	32,039	580	1,763	741	4,976	861	1,011	3,731	286	1,132	37,862	59,991	2,330
PAD District II													
Arab OPEC													
Algeria	604	0	0	0	0	0	0	0	0	0	0	604	20
Saudi Arabia	1,342	0	0	0	0	0	0	0	0	0	0	1,342	45
United Arab Emirates	350	0	0	0	0	0	0	0	0	0	0	350	12
Subtotal Arab OPEC	2,296	0	0	0	0	0	0	0	0	0	0	2,296	76

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, November 1982
(Thousands of Barrels)

Source	Crude Oil	LPG and Ethane	Unrefined Oil	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Distill. Fuel Oil	Resid. Fuel Oil	Special Naphtha	Other Products	Total Products	Total Petroleum	Total (Daily Average)
PAD District II														
Other OPEC														
Iran	438	0	0	0	0	0	0	0	0	0	0	0	438	17
Nigeria	3,180	0	0	0	0	0	0	0	0	0	0	0	3,180	106
Subtotal Other OPEC	3,618	0	0	0	0	0	0	0	0	0	0	0	3,618	123
Other														
Canada	4,509	5,056	250	332	2	0	0	0	514	92	116	6,364	11,173	372
Egypt	999	0	0	0	0	0	0	0	0	0	0	0	999	33
France	4,371	0	0	0	0	0	0	0	0	0	0	0	4,371	151
Mexico	2,118	0	0	0	0	0	0	0	0	0	0	0	2,118	71
United Kingdom	442	0	0	0	0	0	0	0	0	0	0	0	442	15
Other Eastern Hemisphere	12,899	5,056	250	332	2	0	0	0	514	92	116	6,364	19,203	642
Subtotal Other	18,472	5,056	250	332	2	0	0	0	514	92	116	6,364	23,235	841
Total Imports														
PAD District III														
Arab OPEC														
Algeria	2,105	0	0	0	0	0	0	0	2	0	0	2	2,107	70
Saudi Arabia	7,563	0	0	0	0	0	0	0	0	0	817	817	8,380	292
United Arab Emirates	1,065	0	0	0	0	0	0	0	0	0	0	0	1,065	35
Subtotal Arab OPEC	11,133	0	0	0	0	0	0	0	2	0	817	818	11,951	396
Other OPEC														
Brazil	390	0	0	0	0	0	0	0	0	0	0	0	390	12
Gabon	1,157	0	0	0	0	0	0	0	0	0	0	0	1,157	39
Indonesia	1,343	470	0	0	0	0	0	0	0	0	0	0	1,813	50
Iran	1,335	0	0	0	0	0	0	0	0	0	0	0	1,335	45
Italy	6,285	0	0	0	0	0	0	0	0	0	0	0	6,285	18
Japan	3,097	0	0	0	0	0	0	0	0	0	0	0	3,097	103
Venezuela	13,007	470	0	488	0	0	0	0	234	218	348	1,296	14,643	216
Subtotal Other OPEC	33,007	470	0	488	0	0	0	0	418	218	348	1,296	35,359	500
Other														
Bahrain	0	0	582	0	0	0	0	0	0	0	0	0	582	29
Brunei	947	0	0	0	0	0	0	0	0	0	0	0	947	28
Canada	6	6	0	0	0	0	0	0	0	0	0	0	6	0
Egypt	950	0	0	0	0	0	0	0	0	0	0	0	950	32
France	16,598	0	0	0	0	0	0	0	0	0	0	0	16,598	575
Germany	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	1,287	0	0	0	0	0	0	0	0	0	0	0	1,287	42
Qatar	432	0	0	0	0	0	0	0	0	0	0	0	432	14
People's Republic of China	591	0	0	0	0	0	0	0	0	0	0	0	591	20
Puerto Rico	0	0	225	0	0	0	0	0	0	0	0	0	225	450
Territorial and Foreign	1,556	0	0	0	0	0	0	0	404	0	0	0	1,960	76
Trinidad and Tobago	9,495	0	0	0	0	0	0	0	0	0	0	0	9,495	317
United Kingdom	0	0	1,176	0	0	0	0	0	0	0	0	0	1,176	39
Virgin Islands	0	0	0	0	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

Table 21. Imports of Crude Oil and Petroleum Products by Source and PAD District, November 1982
(Thousands of Barrels)

Source	Crude Oil 1	LPG and Ethane	Unrefined Oil	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kerosene	Diesel Fuel Oil	Residual Fuel Oil	Special Naphthas	Other Products 2	Total Products	Total (Daily Average)
PAD District III													
Other													
Other Western Hemisphere	132	0	0	26	0	0	0	310	283	75	0	704	845
Other Eastern Hemisphere	1,132	0	609	0	0	0	0	0	651	97	21	1,286	2,523
Subtotal Other	33,347	607	2,613	26	(9)	0	0	330	1,348	217	266	3,277	38,924
Total Imports	57,447	1,167	2,863	514	(9)	0	0	330	1,666	433	1,431	8,435	65,882
PAD District IV													
Other													
Crude Oil	1,738	570	0	0	0	0	0	(9)	0	1	52	623	2,381
Subtotal Other	1,738	570	0	0	0	0	0	(9)	0	1	52	623	2,381
Total Imports	1,738	570	0	0	0	0	0	(9)	0	1	52	623	2,381
PAD District V													
Arab OPEC													
Subtotal Arab OPEC	0	0	0	236	0	0	0	0	0	0	0	236	236
Other OPEC													
Indonesia	4,789	0	0	0	80	0	0	1	30	0	0	111	4,800
Subtotal Other OPEC	4,789	0	0	0	80	0	0	1	30	0	0	111	4,800
Other													
Canada	217	0	0	0	0	0	0	0	0	0	0	0	217
Mexico	775	627	0	0	0	0	(9)	66	21	15	(9)	720	1,505
People's Republic of China	0	0	0	0	0	0	0	11	0	0	5	16	16
Other Eastern Hemisphere	0	(9)	0	0	981	0	0	11	0	0	0	982	982
Subtotal Other	992	627	0	0	981	0	0	80	285	0	22	541	1,818
Total Imports	5,701	627	0	236	1,215	0	(9)	168	337	15	27	2,279	3,271
													8,407

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve

2 Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, kerosene, fuel oil, other petroleum products

(9) Less than 500 barrels per day

Note: Total may not equal sum of components due to independent rounding

Source: See Explanatory Notes on Data Collection and Estimation

Table 22. Exports of Crude Oil and Petroleum Products by PAD District, November 1982
(Thousands of Barrels)

Commodity	Petroleum Administration for Defense Districts					Total
	I	II	III	IV	V	
Crude Oil (including lease condensate) ¹	0	1,207	0	0	8,852	7,859
Liquidated Petroleum Gases and Ethane	40	8	928	0	141	1,115
Ethane	0	0	(N)	0	0	(N)
Propane	18	3	381	0	57	469
Butane	22	5	535	0	84	646
Butane-Propane Mixtures	0	0	0	0	0	0
Finished Motor Gasoline	(N)	51	280	0	12	343
Napthalene-Type Jet Fuel	0	0	0	0	0	0
Kerosene-Type Jet Fuel	0	0	245	0	28	269
Kerosene	(N)	(N)	0	0	(N)	1
Distillate Fuel Oil	1	0	904	0	410	715
Residual Fuel Oil	1	0	2,517	0	3,946	6,475
Naval Fuel Oil	47	6	16	(N)	0	71
Other Oil > 400 Deg. for Petroleum, Feedstock	0	29	483	0	(N)	522
Special Naphthas	5	1	35	0	1	41
Lubricants	107	12	219	(N)	56	395
Wax	5	(N)	8	0	5	18
Petroleum Coke	3	522	3,486	(N)	2,705	6,716
Asphalt	4	1	(N)	1	2	8
Miscellaneous Products	17	(N)	15	(N)	3	36
Total Product Exports	231	659	8,154	2	6,709	15,723
Total Exports	231	1,866	8,154	2	13,360	23,582

¹ Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange on a barrel-for-barrel basis. Shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(N) Less than 500 barrels.

Numbers in parentheses represent sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 23. Exports of Crude Oil and Petroleum Products by Destination, November 1982
(Thousands of Barrels)

Destination	Crude Oil	LPG and Other Gases	Refined Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphtha	Lubricants	Wax	Petroleum Coke	Asphalt	Other	Total	Total (Daily Average)
Argentina	0	84	0	0	0	0	0	12	0	0	0	0	97	3
Australia	0	7	0	0	0	194	0	23	0	52	0	0	81	3
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	200	7
Belgium & Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	16	0	1,235	0	0	1,251	42
Canada	0	0	0	0	0	0	0	0	0	19	0	0	100	3
Chile	1,207	0	0	0	0	0	0	0	0	30	0	0	30	1
China (Taiwan)	0	0	0	0	0	323	0	47	0	652	0	51	2,365	79
Colombia	0	0	0	0	0	0	0	17	0	0	0	0	19	1
Costa Rica	0	0	0	0	0	0	0	12	0	0	0	0	17	1
Cuba	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Danish Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0	0
El Salvador	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
France	0	0	0	0	0	0	0	0	0	0	0	0	0	0
French Pacific Isl.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ghana	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	0	0	0	0	0	12	0	0	0	0	0	0	0	0
Guatemala	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Honduras	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hong Kong	0	0	0	0	0	0	0	0	0	0	0	0	0	0
India	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Iran	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Italy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Italy Coast	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Japan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jordan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Korea, Republic of	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lebanon	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Malaysia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mexico	0	557	251	23	0	0	0	0	0	0	0	0	1	1
Netherlands	0	27	0	0	0	303	0	16	0	14	0	0	864	28
Nicaragua	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	1,223	0	0	0	0	0	0	1,224	41
Pacific Trust Terr.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peru	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Philippines	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Portugal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Romania	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switzerland	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Taiwan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tanzania	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thailand	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S.A.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.S. Virgin Is.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ukraine	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U.R.S.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yugoslavia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zambia	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Zimbabwe	0	0	0	0	0	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

Table 23. Exports of Crude Oil and Petroleum Products by Destination, November 1982
(Thousands of Barrels)

Destination	Crude Oil 1	LPG and Ethane	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphtha	Lubricants	Wax	Petroleum Coke	Asphalt	Other	Total	Total (Daily Average)
Puerto Rico	2,321	11	0	0	0	353	2	10	1	40	(*)	3	2,323	97
South Africa	0	1	0	0	0	0	0	12	4	45	(*)	3	245	1
Spain	0	1	0	0	(*)	0	(*)	21	0	0	(*)	0	25	1
Sweden	0	118	0	0	0	851	0	1	2	0	0	0	856	29
Switzerland	0	0	0	0	0	0	0	1	(*)	598	0	183	810	30
Taiwan	0	0	0	0	0	0	0	0	0	10	0	0	10	(*)
Thailand	0	2	0	0	0	0	0	2	(*)	(*)	0	2	4	(*)
Turkey	0	23	36	0	0	0	0	1	0	0	0	0	3	(*)
United Arab Emirates	0	0	0	0	0	0	0	1	(*)	0	0	0	33	1
U.S.S.R.	0	(*)	0	0	0	0	0	1	0	28	0	(*)	29	1
United Kingdom	0	0	0	0	0	0	0	4	0	58	0	(*)	59	2
Uruguay	0	0	0	0	0	0	0	1	0	148	0	37	45	2
Venezuela	0	0	0	0	0	0	0	23	0	0	0	0	9	6
Virgin Islands	0	(*)	0	0	0	0	0	(*)	0	0	0	0	(*)	(*)
Yemen	0	0	0	0	0	0	0	2	0	0	0	0	6	(*)
West Germany	3,585	1	0	0	0	0	0	1	(*)	0	0	0	3,585	130
Yugoslavia	0	1	0	0	0	0	0	3	0	84	0	28	116	4
Other	568	0	0	0	0	0	0	0	0	45	0	0	45	1
Total	7,859	1,115	343	209	715	5,475	41	305	18	6,718	8	650	23,582	786

1. Exports of crude oil are prohibited under normal circumstances. Some crude oil is shipped to Canada in exchange, on a barrel-for-barrel basis, for shipments of crude oil to Puerto Rico and the Virgin Islands are not prohibited because these territories are U.S. possessions.

(*) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

- 24. Stocks of Crude Oil and Petroleum Products by PAD District, November 30, 1962
(Thousands of Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			United States			
	East Coast	Appalachian	Total	Appalachian	Ind. B. Ky.	Ohio, W. Va., Md.	Total	Texas Inland	Texas Gulf Coast	L.L. Gulf Coast	No. La. Ark.	New Mexico		Total	Rocky Mtn.	Dak. S. West Coast
Crude Oil (incl. lease condensate) ¹																
Refinery	—	—	13,782	—	—	—	13,784	—	—	—	—	—	48,947	1,559	26,400	107,002
Tank Farms and Pipelines	—	—	2,972	—	—	—	61,055	—	—	—	—	—	98,474	9,914	30,161	202,476
Losses	—	—	90	—	—	—	1,595	—	—	—	—	—	16,775	1,412	1,720	21,961
Strategic Petroleum Reserve ²	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alaskan In-Transit	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0	290,963
Total	—	—	18,724	—	—	—	77,744	—	—	—	—	—	454,162	12,085	82,475	645,990
Petroleum Products																
Refinery	45,259	3,962	49,221	391	42,845	5,497	20,497	10,136	77,521	48,546	5,854	1,273	142,160	12,477	63,319	337,537
Bulk Terminal	148,694	8,188	156,882	3,912	40,287	8,512	11,175	63,896	5,359	34,720	7,698	4,147	51,763	2,795	19,312	294,648
Pipeline	28,527	2,029	31,456	1,423	12,587	3,587	17,240	34,817	8,008	7,576	7,072	14,548	1,916	38,222	2,627	4,201
Natural Gas Processing Plant	469	686	1,155	6,316	35,061	17,797	65,430	10,785	3,818	22,890	10,785	3,818	3,996	44,318	373	589
Total	222,949	15,165	238,114	6,316	95,061	17,797	65,430	107,434	23,321	142,737	73,400	29,268	3,656	277,465	18,272	87,731
Natural Gasoline and Isopentane																
Refinery	5	0	5	0	24	52	115	191	54	153	136	1	13	356	9	25
Pipeline	0	0	0	0	77	15	310	402	211	82	0	60	0	433	102	5
Natural Gas Processing Plant	5	27	32	0	25	13	1,212	1,250	362	2,414	508	23	33	3,360	51	25
Total	10	27	37	0	126	80	1,837	1,843	647	2,649	843	84	126	4,149	242	55
Unfractionated Stream																
Refinery	0	0	0	0	78	0	23	101	0	20	36	0	0	56	0	0
Pipeline	0	0	0	0	45	2	2,300	2,597	307	1,302	61	2	156	1,027	31	2
Natural Gas Processing Plant	0	0	0	0	174	2	2,323	2,498	307	1,330	89	2	156	1,083	31	2
Total	0	0	0	0	297	4	2,623	2,955	314	1,638	146	4	314	1,140	62	4
Plant Condensate																
Refinery	0	0	0	0	5	0	0	6	10	75	0	96	0	191	0	0
Pipeline	0	0	0	0	0	0	0	1	888	980	49	8	17	1,305	0	0
Natural Gas Processing Plant	0	0	0	0	2	0	5	7	36	34	6	10	1	87	59	0
Total	0	0	0	0	7	0	5	13	912	474	55	114	16	1,573	59	0
Ethane																
Refinery	0	0	0	0	9	0	0	9	0	409	0	0	0	409	0	0
Bulk Terminal	0	0	0	0	80	0	40	130	0	727	0	0	0	727	0	0
Pipeline	0	0	0	0	42	872	159	1,173	177	76	114	0	0	372	0	0
Natural Gas Processing Plant	0	0	0	0	24	0	433	458	361	1,363	413	1	0	2,161	(9)	0
Total	0	0	0	0	155	872	632	1,760	538	2,677	527	1	0	3,646	(9)	0
Propane for Petrochemical Feedstock Use																
Refinery	72	0	72	0	72	0	1	73	0	8	390	0	0	407	0	0
Total	72	0	72	0	72	0	1	73	0	8	390	0	0	407	0	0
Propane for Other Uses																
Refinery	590	4	594	2	1,070	17	246	1,325	77	766	900	3	4	1,759	173	216
Bulk Terminal	586	0	586	0	1,126	71	125	502	167	1,155	6	43	0	11,771	37	0
Pipeline	857	1,677	2,534	61	1,106	217	1,030	1,254	305	80	245	863	151	1,254	114	0
Natural Gas Processing Plant	429	653	1,081	0	2,185	119	0	1,448	5,767	3,567	3,567	268	18,496	165	347	91,486
Total	2,441	2,334	4,775	64	5,430	424	11,730	17,030	3,005	16,137	6,347	4,468	444	33,650	469	865

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, November 30, 1982
(Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV		United States
	Exist Coast	Apprais- ed chain #1	Total	Apprais- ed chain #2	Int. Ill. & Ky.	Minn. Wis.	Ore. Mo.	Texas Inland	Texas Gulf Coast	La. Calif.	New Mexico	Total	Rocky Mts. West Coast	
Balance for Petro. Feed Use														
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Balance for Other Uses														
Refinery	98	0	98	261	273	49	181	764	121	328	1,109	2	3	
Bulk Terminal	262	0	262	0	402	0	71	473	108	3,365	0	0	0	
Pipeline	30	156	186	0	832	15	264	1,201	882	95	0	153	75	
Natural Gas Processing Plant	17	5	22	0	66	14	949	929	1,004	4,302	2,688	137	81	
Total	408	131	539	261	1,653	78	1,356	3,567	2,116	7,881	3,813	302	169	
Balance-Propene Mixtures for Petro. Feed Use														
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	
Balance-Propene Mixtures for Other Uses														
Refinery	0	0	0	0	0	0	0	0	1	16	65	0	19	
Bulk Terminal	0	0	0	0	196	0	0	186	0	1	0	0	0	
Pipeline	0	0	0	0	0	0	20	614	45	14	0	1	674	
Natural Gas Processing Plant	0	0	0	0	3	0	83	86	32	7	15	2	41	
Total	0	0	0	0	199	0	103	902	647	69	2	20	807	
Ethane-Propene Mixtures														
Bulk Terminal	0	0	0	0	0	0	0	1	235	1,552	0	0	0	
Pipeline	0	0	0	0	66	0	484	520	510	2,483	2	0	118	
Natural Gas Processing Plant	0	0	0	0	0	0	1,174	1,174	240	4,853	0	0	256	
Total	0	0	0	0	66	0	1,658	1,705	1,005	6,444	2	0	374	
Isobutane														
Refinery	9	18	27	18	88	13	152	271	102	254	557	10	7	
Bulk Terminal	0	0	0	0	72	0	80	90	1,588	0	0	0	0	
Pipeline	0	0	0	0	428	0	54	553	177	10	0	59	48	
Natural Gas Processing Plant	0	2	2	0	45	4	1,261	1,330	154	2,187	1,231	54	68	
Total	9	20	29	18	664	17	1,535	2,234	532	4,338	1,678	114	124	
Other Hydrocarbons and Alcohol														
Refinery	0	15	15	0	88	0	0	88	1	70	37	0	0	
Total	0	15	15	0	88	0	0	88	1	70	37	0	0	
Unfinished Oil														
Refinery	3,521	308	3,829	46	2,455	137	1,392	2,818	901	6,200	3,861	184	97	
Naphthalene and Lignin	1,652	9	1,661	0	2,952	10	1,138	3,400	328	7,204	1,140	100	3	
Kerosene and Lighter Gas Oil	1,652	489	2,141	99	5,837	287	1,650	8,083	817	12,415	6,767	860	148	
Heavy Gas Oils	1,618	253	1,871	2	3,084	43	1,461	4,580	522	3,763	3,492	27	0	
Roadblum	13,780	1,045	14,825	147	13,628	487	5,729	19,991	2,588	25,612	15,370	1,111	246	
Total	13,780	1,045	14,825	147	13,628	487	5,729	19,991	2,588	25,612	15,370	1,111	246	

See footnote at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, November 30, 1982
(Thousands of Barrels) (continued)

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV				United States
	East Coast	Appalachian	Total	Ind. Res.	Ind. Res.	Wholesale	Wholesale	Wholesale	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	La. Gulf Coast	
Motor Gasoline Blending Components																	
Bulk Terminal	4,570	118	4,698	34	5,423	592	1,654	7,733	1,342	8,428	7,182	133	149	17,234	1,896	8,130	39,779
Pipeline	294	0	294	5	153	1	46	180	53	45	0	0	0	0	0	0	93
Total	4,872	118	4,990	39	5,556	593	1,700	7,913	1,395	8,473	7,182	133	149	17,444	1,896	8,223	40,681
Aviation Gasoline Blending Components																	
Refinery	0	0	0	0	97	0	7	104	36	25	146	0	0	209	0	35	351
Total	0	0	0	0	97	0	7	104	36	25	146	0	0	209	0	35	351
Total Finished Motor Gasoline																	
Refinery	5,271	266	5,537	100	5,837	1,450	4,137	11,234	2,455	8,368	5,216	1,030	170	17,234	2,339	7,068	43,532
Bulk Terminal	36,533	3,597	40,130	1,780	17,422	3,772	5,374	28,248	2,538	3,367	1,815	2,335	282	12,538	1,706	9,533	83,055
Pipeline	14,940	651	15,591	734	6,911	1,200	7,466	16,311	2,403	3,210	4,364	7,601	188	15,274	1,200	2,369	53,743
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Total	59,682	4,314	61,166	2,614	29,970	6,452	16,877	55,853	7,391	17,473	11,375	11,157	650	48,040	5,276	13,960	159,362
Finished Leaded Motor Gasoline																	
Refinery	2,530	145	2,675	40	2,935	300	2,433	5,824	1,349	3,658	2,699	818	79	8,941	1,457	3,045	21,942
Bulk Terminal	17,711	1,516	19,227	878	8,533	2,245	3,458	16,110	1,297	2,759	928	1,265	169	6,348	1,050	5,181	46,986
Pipeline	6,428	342	6,770	348	3,000	726	4,843	8,727	1,556	2,277	1,604	3,730	112	8,385	791	1,103	25,723
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Total	26,677	2,103	28,780	1,280	14,968	3,881	10,532	29,761	4,202	8,694	5,141	5,837	360	24,474	3,276	9,368	95,678
Finished Unleaded Motor Gasoline																	
Refinery	2,741	121	2,862	44	3,102	350	1,704	5,400	1,101	4,570	2,517	214	91	6,393	881	4,047	21,583
Bulk Terminal	18,716	1,981	20,696	904	8,854	1,527	1,817	13,109	1,341	2,508	377	1,241	123	6,190	686	4,302	43,026
Pipeline	5,512	309	5,821	336	3,811	462	2,823	7,833	847	1,481	2,440	3,865	76	8,888	427	1,199	27,913
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	23,968	2,411	26,379	1,234	15,967	2,340	6,344	26,092	3,189	8,528	5,294	5,320	290	22,572	1,990	8,540	93,833
Gasoline																	
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Bulk Terminal	7	0	7	0	35	0	1	36	0	0	0	0	0	0	0	0	43
Pipeline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	7	0	7	0	35	1	1	37	0	0	0	0	0	0	0	0	51
Finished Aviation Gasoline																	
Refinery	26	0	26	0	100	0	39	142	22	330	140	0	0	482	36	239	833
Bulk Terminal	433	41	474	17	257	44	65	383	46	22	4	30	58	159	18	427	1,482
Pipeline	15	0	15	0	11	0	31	43	0	0	0	0	0	0	0	0	60
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	475	41	516	17	371	44	135	567	132	352	144	30	58	716	55	666	2,570
Nonjet-Type Jet Fuel																	
Refinery	129	39	168	0	472	67	273	812	271	729	341	218	157	1,716	291	1,021	3,668
Bulk Terminal	7	10	17	35	171	37	100	345	171	64	0	45	0	280	8	130	930
Pipeline	185	0	185	25	40	41	91	171	171	0	0	0	235	550	87	304	1,507
Total	321	49	370	40	645	162	472	1,328	613	793	350	355	392	2,546	346	1,445	6,095

See footnotes at end of table.

Table 24. Stocks of Crude Oil and Petroleum Products by PAD District, November 30, 1982
(Thousands of Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV			United States
	Exst. Count	Appre. chan. #1	Total	Appre. chan. #2	Ind. Ill. Kv.	Min. Wisc. Daks.	Okla. Kans. Mo.	Total	Texas Gulf Coast	La. No. La. Ark.	New Mexico	Total	Rocky Mt.	Dist. IV	Rocky Mt.	Dist. V	United States
Special Refineries																	
Refinery	48	45	93	0	245	0	190	435	35	1,355	70	121	0	1,482	8	192	2,214
Bulk Terminal	722	25	747	38	184	7	0	227	0	120	0	19	0	135	0	0	1,113
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	0	133	0	0	0	133	0	0	133
Total	770	70	840	38	429	7	190	662	168	1,378	70	140	0	1,784	8	192	3,650
Lubricants																	
Refinery	77	464	541	0	45	0	44	89	0	201	83	0	0	334	2	44	1,000
Bright Stock	535	457	992	0	593	0	447	1,040	0	1,859	1,042	78	0	2,960	57	521	5,560
Other	658	347	1,005	0	137	0	136	283	39	2,542	286	104	0	2,931	7	101	3,747
Bulk Terminal	180	1,015	1,195	12	432	16	54	514	4	12	197	68	2	284	3	526	2,241
Total	2,095	1,228	3,323	12	1,227	16	671	1,908	43	4,165	1,508	331	2	6,149	69	1,191	12,548
Wax, Microcrystalline																	
Refinery	3	37	40	0	0	0	14	14	38	28	10	1	0	67	0	0	121
Total	3	37	40	0	0	0	14	14	38	28	10	1	0	67	0	0	121
Wax, Crystalline-Fully Refined																	
Refinery	10	45	55	0	20	0	27	47	0	83	178	0	0	258	10	34	404
Total	10	45	55	0	20	0	27	47	0	83	178	0	0	258	10	34	404
Wax, Crystalline-Other																	
Refinery	6	74	80	0	0	0	7	7	0	131	0	0	0	131	0	11	228
Total	6	74	80	0	0	0	7	7	0	131	0	0	0	131	0	11	228
Petroleum Coke																	
Refinery	1,174	0	1,174	0	830	83	1,140	2,083	0	146	438	218	0	882	713	1,371	8,033
Total	1,174	0	1,174	0	830	83	1,140	2,083	0	146	438	218	0	882	713	1,371	8,033
Asphalt																	
Refinery	1,725	27	1,752	219	1,678	479	822	3,186	503	580	586	754	103	2,838	1,144	1,151	10,130
Bulk Terminal	1,623	383	2,006	142	961	357	113	1,573	0	0	166	73	0	228	0	140	3,958
Total	3,348	410	3,758	361	2,639	836	935	4,759	503	580	754	827	103	3,077	1,144	1,291	14,081
Road Oil																	
Refinery	0	0	0	0	20	0	0	20	0	0	0	1	0	1	0	33	54
Total	0	0	0	0	20	0	0	20	0	0	0	1	0	1	0	33	54
Miscellaneous Products																	
Refinery	333	54	387	1	71	14	13	99	48	440	303	66	0	857	1	202	1,546
Bulk Terminal	25	0	25	0	14	3	2	19	0	12	16	0	28	0	113	186	186
Pipeline	0	0	0	0	0	0	0	0	10	7	0	0	0	17	0	17	17
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	4	32	824	1	93	0	0	0	895
Total	358	54	413	1	85	17	15	122	60	1,271	315	175	0	1,852	2	316	2,704
Total Stocks, All Oils	—	—	259,838	—	—	—	—	265,278	—	—	—	—	—	791,695	31,157	170,265	1,455,155

1 Crude oil data are not collected by refinery district.

2 Includes 32769 thousands of barrels of domestic crude oil.

(a) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 26. Movements of Petroleum Products by Pipeline Between PAD Districts, November 1982
(Thousands of Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	I	II	III	IV	I	II	I	II	III	IV	I	II	I	II	III
Natural Gasoline and Isopentane	0	0	0	329	0	0	0	1,212	0	0	0	352	14	0	0
Unfractionated Steam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquidified Petroleum Gases	0	1,016	1,738	148	1,463	5,789	0	0	0	0	114	67	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	749	0	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	4,288	2,009	1,952	37,239	10,927	0	0	0	0	0	973	488	0	891	0
Finished Landed Motor Gasoline	2,353	534	1,112	970	17,766	2,312	0	0	0	0	569	390	0	671	0
Unfractionated Motor Gasoline	1,935	78	840	16,269	9,615	0	0	0	0	0	408	132	0	180	0
Gasoline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Aviation Gasoline	10	0	0	9	28	87	0	0	0	0	0	0	0	0	0
Jet Fuel	0	0	0	0	256	0	0	0	0	0	221	85	0	107	0
Jet Fuel	143	119	52	633	634.0	1,833	0	0	0	0	177	4	0	51	0
Kerosene-Type Jet Fuel	14	0	0	0	836	69	0	0	0	0	0	0	0	0	0
Kerosene	1,573	267	748	139	18,826	1,804	0	0	0	0	370	255	0	304	0
Distillate Fuel Oil	1,073	327	748	139	18,826	1,804	0	0	0	0	370	255	0	304	0
No. 4 Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Products	0	72	0	0	0	32	0	0	0	0	0	0	0	0	0
Total	6,148	2,631	4,342	2,481	88,768	22,482	0	1,741	1,286	81	1,282	0	1,282	0	1,282

Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 27. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, November 1982
(Thousands of Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	I	II	III	IV	I	II	I	II	III	New Eng	Cent	Low At	I	II	III
Crude Oil	0	0	0	0	0	0	0	0	0	405	0	405	0	1,574	0
Petroleum Products	2,552	538	0	673	688	0	27,540	3,350	7,068	17,131	2,451	885	0	0	48
Unfractionated Steam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquidified Petroleum Gases	0	351	0	0	0	0	1,371	0	1,292	22	0	0	0	0	0
Motor Gasoline Blending Components	1,276	0	0	232	20	0	11,628	967	542	10,117	685	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	140	14	42	84	33	0	0	0	0
Finished Motor Gasoline	172	0	0	0	0	0	459	0	155	254	0	0	0	0	0
Finished Landed Motor Gasoline	90	0	0	7	0	0	3,709	229	958	2,522	271	0	0	0	0
Unfractionated Motor Gasoline	33	0	0	0	0	0	474	0	243	221	0	0	0	0	0
Kerosene-Type Jet Fuel	33	0	0	38	145	0	5,076	1,280	1,491	2,327	507	0	0	0	0
Kerosene	906	0	0	178	457	0	2,061	1,852	1,145	954	152	0	0	0	0
Distillate Fuel Oil	14	0	0	8	25	0	1,852	1,852	1,145	954	152	0	0	0	0
No. 4 Fuel Oil	0	0	0	0	0	0	165	0	76	114	0	0	0	0	0
Residual Fuel Oil	141	35	0	18	43	0	498	0	364	104	240	0	0	25	0
Miscellaneous Products	0	102	0	182	0	0	310	0	13	0	0	0	0	0	0
Asphalt and Road Oil	20	17	0	0	0	0	787	0	650	131	85	3	0	0	13
Total	2,552	538	0	673	688	0	27,954	3,350	7,473	17,131	4,025	885	1,554	0	16,298

Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 28. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, November 1982
(Thousands of Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V		
	Receipts PAD I	Shipments PAD I	Net Receipts PAD I	Receipts PAD II	Shipments PAD II	Net Receipts PAD II	Receipts PAD III	Shipments PAD III	Net Receipts PAD III	Receipts PAD IV	Shipments PAD IV	Net Receipts PAD IV	Receipts PAD V	Shipments PAD V	Net Receipts PAD V
Crude Oil	2,669	0	2,669	1,574	0	1,574	18,348	1,978	16,269	0	0	0	0	19,992	-19,992
Petroleum Products	97,841	9,228	88,613	34,329	11,615	22,714	6,207	121,626	-115,429	2,481	2,700	-219	3,749	48	3,701
Nuclear Gasoline	0	0	0	1,354	1,329	25	343	1,212	-869	0	366	-366	0	0	0
Unfractionated Naphtha	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate	2,704	2,681	23	5,913	2,904	3,009	1,898	7,485	-5,657	168	181	-33	0	0	0
Unfractionated Oils	1,371	351	1,020	0	0	0	361	1,245	-1,245	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	749	0	749	0	749	-749	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	50,932	5,544	45,388	17,632	5,109	12,523	2,039	81,750	-59,701	1,532	1,347	205	1,934	0	1,934
Finished Leaded Motor Gasoline	23,260	3,049	20,211	5,054	2,627	2,427	1,139	39,859	-37,777	876	1,037	-161	1,240	0	1,240
Finished Unleaded Motor Gasoline	27,432	2,495	24,937	8,558	2,481	6,077	897	32,871	-31,974	656	310	358	594	0	594
Gasoline	168	10	158	120	8	112	0	288	-288	0	0	0	0	0	0
Filtration-Type Jet Fuel	175	17	158	2,217	49	2,168	0	288	-288	0	0	0	0	0	0
Kerosene	10,571	233	10,338	2,341	81	1,520	52	12,830	-12,778	533	182	-182	326	0	326
Diesel Fuel Oil	1,310	87	1,223	148	0	148	0	1,369	-1,369	0	0	0	0	0	0
Distillate Fuel Oil	25,269	2,478	22,791	5,045	1,336	3,709	891	27,583	-26,652	139	538	-430	574	0	574
No. 4 Fuel Oil	24,925	2,473	22,452	5,045	1,251	3,794	748	27,240	-26,484	139	553	-420	594	0	594
Residual Fuel Oil	343	0	343	0	145	-145	145	343	-198	0	0	0	0	0	0
Naphtha and Other Oils for Petro.	2,859	0	2,859	152	635	-483	457	3,708	-2,851	0	0	0	475	0	475
Roadblock Unit	45	14	31	79	32	47	32	149	-85	0	0	0	0	10	-10
Solvent Naphtha	202	0	202	174	0	174	0	320	-320	0	0	0	0	0	0
Lubricants	505	178	327	381	61	320	103	935	-832	0	0	0	297	25	182
Wax	13	0	13	0	0	0	0	13	-13	0	0	0	0	0	0
Asphalt and Road Oil	492	102	390	289	182	107	102	599	-487	0	0	0	0	0	0
Miscellaneous Products	859	37	822	147	72	75	30	917	-867	0	0	0	3	13	-13
Total All Products	99,500	9,258	90,242	36,503	11,615	24,888	24,525	122,675	-95,140	2,481	2,700	-219	3,749	16,599	-16,599

Notes: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 23. Production of No. 4 Fuel Oil and Residual Fuel Oil By Sulfur Content, November 1982
(Thousands of Barrels)

Commodity	PAO District I			PAO District II							PAO District III			PAO District IV			Total	New Mexico	United States
	East Coast	Appalachian	Total	Ind., Ill., Ky.	Miss., Wisc., La.	Okla., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ave.	Ind., Ill., Ky.	Miss., Wisc., La.	Okla., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast			
No. 4 Fuel Oil																			
0.00 to 0.10% Sulfur	0	2	2	0	33	0	25	15	328	67	0	0	0	0	0	0	678	23	811
0.11 to 0.50% Sulfur	0	2	2	0	0	0	0	15	26	1	0	0	0	0	0	0	42	0	44
0.51 to 1.00% Sulfur	0	0	0	0	0	0	22	0	0	0	0	0	0	22	23	0	23	0	45
1.01 to 2.00% Sulfur	0	0	0	0	10	0	10	0	16	2	0	0	0	0	261	0	261	0	263
Greater Than 2.00% Sulfur	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil	3,305	115	4,050	116	1,831	343	433	2,603	730	253	77	13,484	353	9,038	23,606				
0.00 to 0.10% Sulfur	370	25	395	0	16	5	0	21	141	270	0	132	8	749	24	203	1,389		
0.11 to 0.50% Sulfur	721	0	721	0	40	0	126	156	29	241	0	10	0	257	138	958	2,140		
0.51 to 1.00% Sulfur	1,583	50	1,737	116	650	0	171	420	421	1,370	112	0	0	3,351	86	1,348	7,420		
1.01 to 2.00% Sulfur	794	0	794	0	639	127	112	871	76	560	33	64	0	7,271	11	6,125	8,432		
Greater Than 2.00% Sulfur	0	0	0	0	480	211	24	715	53	3,357	95	0	0	0	0	0	0	0	0
Total	6,403	190	6,593	116	2,901	358	629	3,803	864	253	77	13,484	353	9,038	23,606				

Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 30. Stocks of No.4 Fuel Oil and Residual Fuel Oil By Sulfur Content, November 1982
(Thousands of Barrels)

Commodity	PAO District I		PAO District II				PAO District III				PAO District IV			Unalut States		
	East Coast	West Coast	Total	Alaska Chain #1	Alaska Chain #2	Ind. Kry	Min. Wash. Dist.	Chas. Hans. Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La. Ark.		New Mexico	
No. 4 Fuel Oil - 0.00 to 0.30% Sulfur																
Refinery	0	4	4	0	0	0	0	0	0	0	0	1	57	4	0	62
Bulk Terminal	644	0	644	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	644	4	648	0	0	0	0	0	0	0	0	1	57	4	0	62
No. 4 Fuel Oil - 0.31 to 0.50% Sulfur																
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	71	0	71	0	0	0	0	0	0	0	0	0	0	0	0	0
No. 4 Fuel Oil - 0.51 to 1.00% Sulfur																
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	692	0	692	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	692	0	692	0	0	0	0	0	0	0	0	0	0	0	0	0
No. 4 Fuel Oil - 1.01 to 2.00% Sulfur																
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	433	0	433	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	433	0	433	0	0	0	0	0	0	0	0	0	0	0	0	0
No. 4 Fuel Oil - Greater Than 2.00% Sulfur																
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	65	3	68	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	65	3	68	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - 0.00 to 0.30% Sulfur																
Refinery	391	423	814	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	5,704	0	5,704	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	6,095	423	6,518	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - 0.31 to 0.50% Sulfur																
Refinery	521	684	1,205	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	2,690	0	2,690	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3,211	684	3,895	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - 0.51 to 1.00% Sulfur																
Refinery	1,165	1,165	2,330	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	7,080	0	7,080	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	8,245	1,165	9,410	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - 1.01 to 2.00% Sulfur																
Refinery	671	87	758	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	3,592	332	3,924	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4,263	419	4,682	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - Greater Than 2.00% Sulfur																
Refinery	1,170	1,170	2,340	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	1,170	0	1,170	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2,340	1,170	3,510	0	0	0	0	0	0	0	0	0	0	0	0	0
Residual Fuel Oil - Sulfur Content Not Specified																
Refinery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bulk Terminal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 31. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, November 1982
(Thousands of Barrels)

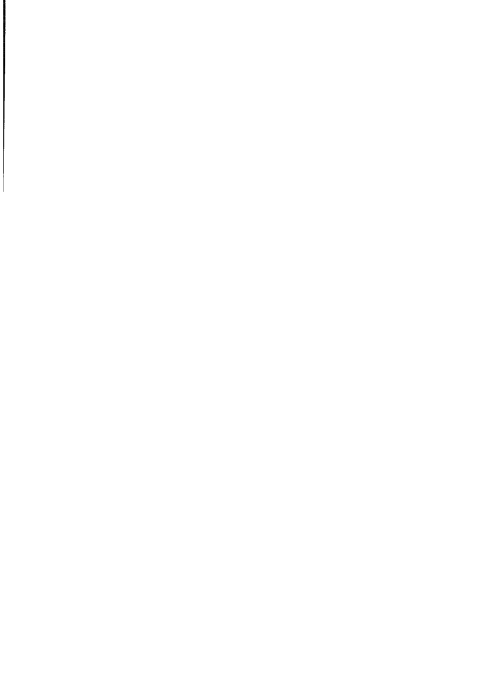
Country	Residual Fuel Oil				
	0.50 to 0.59%	0.51 to 0.80%	1.01 to 2.00%	Greater Than 2.00%	Total
Arab OPEC					
Algeria	2,595	0	0	0	2,595
Iran	0	0	0	0	0
Kuwait	0	0	0	0	0
Libya	216	182	0	0	398
Qatar	0	0	0	0	0
Saudi Arabia	0	0	0	0	0
United Arab Emirates	0	0	0	0	0
Subtotal Arab OPEC	2,721	182	0	0	2,903
Other OPEC					
Ecuador	0	0	0	0	0
Gabon	0	0	0	0	0
Indonesia	0	10	0	0	10
Malaysia	0	0	0	0	0
Nigeria	182	0	0	0	182
Venezuela	1,389	0	220	4,429	6,038
Subtotal Other OPEC	1,571	10	220	4,429	6,230
Other					
Angola	0	0	0	0	0
Australia	0	0	0	0	0
Bahamas	0	0	0	0	0
Bolivia	0	0	0	0	0
Brazil	860	0	0	0	860
Canada	0	0	0	0	0
Chad	158	0	457	39	654
Egypt	0	0	0	0	0
France	0	0	0	0	0
Ghana	0	0	0	0	0
Guinea	150	0	0	0	150
Lebanon	0	0	0	0	0
Malaysia	0	0	0	0	0
Mexico	0	0	0	0	0
Netherlands	0	0	0	0	0
Netherlands Antilles	189	0	215	4,178	4,582
Norway	0	0	0	0	0
Oman	0	0	0	0	0
People's Republic of China	0	0	0	0	0
Peru	0	0	0	0	0
Puerto Rico	0	281	0	220	501
Spain	0	0	0	0	0
Tanzania	0	0	0	0	0
Turkey	0	0	404	0	404
United Kingdom	0	0	0	0	0
Virgin Islands	452	905	343	522	2,222
Yugoslavia	0	0	0	0	0
Zaire	0	0	0	0	0
Other Western Hemisphere					
Honduras	252	200	548	0	1,000
Other Eastern Hemisphere	774	385	33	0	1,192
Subtotal Other	2,504	1,656	4,918	5,056	13,134
Total Imports	6,806	1,822	5,038	9,484	23,220

Note: Total may not equal sum of components due to independent rounding.
Source: See Explanatory Notes on Data Collection and Estimation.

Table 32. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, November 1982
(Thousands of Barrels)

State	Residual Fuel Oil					Not Specified	Total
	0.00 to 0.30%	0.31 to 0.49%	0.51 to 1.00%	1.01 to 2.00%	Greater Than 2.00%		
PAD District I	5,926	1,362	4,418	1,845	9,431	0	22,760
Connecticut	0	0	215	0	0	0	215
Florida	0	0	215	48	1,504	0	1,768
Georgia	0	0	0	0	0	0	0
Illinois	0	0	0	0	0	0	0
Maine	0	0	0	0	0	0	0
Maryland	0	0	848	32	266	0	1,239
Massachusetts	0	0	0	72	1,653	0	1,725
New Jersey	1,050	567	280	0	1,513	0	3,410
New York	4,458	575	2,381	812	1,207	0	9,333
North Carolina	0	0	0	347	287	0	634
Pennsylvania	308	230	560	0	83	0	1,282
Rhode Island	0	0	0	184	112	0	355
South Carolina	0	0	0	0	0	0	0
Virginia	102	0	0	146	1,324	0	1,673
PAD District II	115	0	319	41	33	0	514
Michigan	0	0	274	0	0	0	274
Minnesota	50	0	0	0	0	0	50
North Dakota	4	0	0	41	39	0	85
Ohio	60	0	45	0	0	0	105
PAD District III	748	200	301	404	14	0	1,668
Louisiana	2	0	220	404	14	0	640
Texas	744	200	81	0	0	0	1,026
PAD District IV	0	0	0	0	0	0	0
PAD District V	19	260	0	58	0	0	337
Hawaii	2	260	0	53	0	0	516
Oregon	0	0	0	4	0	0	4
Washington	17	0	0	0	0	0	17
All PAD Districts	6,806	1,822	5,038	2,147	5,484	0	25,297

Note: Total may not equal sum of components due to independent rounding.
Sources: See Explanatory Notes on Data Collection and Estimation.



Glossary



Alcohol. The family name of a group of organic chemical compounds composed of carbon, hydrogen and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus hydroxyl group, $\text{CH}_3(\text{CH}_2)_n\text{OH}$. "Alcohol" includes ethanol and methanol.

Asphalt. A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor is 42-gallon barrels per short ton.

ASTM. The acronym for the American Society for Testing and Materials.

Aviation Gasoline Blending Components. Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

Aviation Gasoline (Finished). All special grades of gasoline for use in aviation reciprocating engines as given in ASTM Specification D 910 and Military Specification MIL-G-5572.

Barrel. A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

Butane. A normally gaseous paraffinic hydrocarbon, C_4H_{10} . It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

- **Normal Butane**—A saturated straight-chain hydrocarbon of butane. It is a colorless paraffin gas that boils at a temperature of 31.1°F . This classification includes mixtures of gases that contain 80 percent or more normal butane.
- **Other Butanes**—All butanes not included as normal butane or isobutane.

Butane-Propane Mixtures. Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane. They are extracted from natural gas and refinery gas streams.

Butylene. An olefinic hydrocarbon, C_4H_8 , recovered from refinery processes. It is reported under the "Butane" category.

Coal. A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite which conform to ASTM Specification D 388.

Crude Oil (including Lease Condensate). A mixture of hydrocarbons that existed in liquid phase underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Lease condensate is included. Drips are also included, but topped crude (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixtures with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign, according to the following:

- **Domestic**—Crude oil produced in the United States or from its outer continental shelf as defined in 43 U.S.C. 1331. Hydrocarbons such as shale oil and tar sand oil are included.
- **Foreign**—Crude oil produced outside the United States. Imported Athabasca hydrocarbons are included.

including internal engine fuel and fuel for agricultural machinery, and electric power generation included are products known as No. 1 and No. 2 heating oils, No. 1 and No. 2 diesel fuel oils, and No. 4 fuel oil.

• **No. 1 Fuel Oil**—A light distillate fuel oil intended for vaporizing pot-type burners. ASTM Specification D 396 specifies for this grade maximum distillation temperatures of 400° F. at the 10-percent point and 550° F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100° F.

• **No. 2 Fuel Oil**—A distillate fuel oil for domestic heating for use in atomizing-type burners or for moderate capacity commercial-industrial burner units. ASTM Specification D 396 specifies for this grade temperatures at the 90-percent point between 540° and 640° F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100° F.

• **No. 1 and No. 2 Diesel Fuel Oils**—Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D 975:

1. **No. 1-D**—A volatile distillate fuel oil in the 400° to 550° F. boiling range for engines in service requiring frequent speed and load changes. Type C-B diesel fuel, which is used for city buses and similar operations, is included.

2. **No. 2-D**—A distillate fuel oil of lower volatility in the 540° to 640° F. boiling range for engines in industrial and heavy mobile service. Type R-R diesel fuel for railroad compression-ignition engines and Type T-T for diesel-engine trucks are included.

• **No. 4 Fuel Oil**—A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D 396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100° F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D 975.

Eastern Hemisphere. That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

Electric Energy (Purchased). Electricity purchased for refinery operations that is not produced within the refinery complex.

Ethane. A normally gaseous paraffinic hydrocarbon, C_2H_6 , extracted from natural gas and refinery gas streams. "Ethane" includes any product containing 90 percent liquid volume or more ethane.

Ethane-Propane Mixtures. Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted for natural gas and refinery gas streams.

Ethylene. An olefinic hydrocarbon, C_2H_4 , recovered from refinery and petrochemical processes. It is reported in the "Ethane" category.

Field Production. Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

Gas Well Gas. Natural gas produced from gas wells. Such gas may be either associated gas or non-associated gas.

• **Associated Gas**—Free natural gas in immediate contact, but not in solution, with crude oil in the reservoir.

• **Non-Associated Gas**—Free natural gas not in contact with, nor dissolved in, crude oil in the reservoir.

Imported Crude Oil Burned as Fuel. The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. "Imported crude oil burned as fuel" includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

Isobutane. A saturated branch-chain isomer of butane. It is a colorless paraffinic gas that has a temperature of 10.9° F. This classification includes mixtures of gases that contain 80 percent volume or more isobutane. It is extracted from natural gas and refinery gas streams.

Isopentane. A saturated branch-chain hydrocarbon, C_5H_{12} , obtained by fractionation of gasoline or isomerization of normal pentane.

Kerosene. A petroleum distillate that boils at a temperature between 300° and 550° F., that has point higher than 100° F. by ASTM Method D 56, that has a gravity range from 40° to 46° API, has a burning point in the range of 150° to 175° F. It is a clean-burning product suitable for use as an illuminant when burned in wick lamps. Includes grades of kerosene called range oil having properties similar to No. 1 fuel oil, but with a gravity of about 48° API and having a maximum end-point of 550° F. Kerosene is used in space heaters, cook stoves, and water heaters.

Kerosene-Type Jet Fuel. A quality kerosene product with an average gravity of 40.7° API, percent distillation temperature of 400° F., and an end-point of 572° F. It is covered by Specification D 1655 and Military Specification MIL-T-5624L (Grade JP-5 and JP-8). It is primarily for commercial turbojet and turboprop aircraft engines.

Lease Condensate. A natural gas liquid recovered from gas well gas (associated and non-associated) lease separators or natural gas field facilities. Lease condensate consists primarily of pentane and heavier hydrocarbons.

Lease Separator. A surface facility used for separating casinghead gas from produced crude oil and separating gas from that portion of associated gas and non-associated gas that liquefies at the temperature and pressure conditions of the separator.

Liquefied Petroleum Gases (LPG). Propane, propylene, butanes, butylene, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that treat raw natural gas plant liquids. Formerly called "Liquefied Gases."

Liquefied Refinery Gases (LRG). Liquefied petroleum gases fractionated from refinery or stills. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propylene mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as petrochemical feedstocks and also excludes liquefied gases ready for blending into gas which are reported as gasoline blending components. Liquefied refinery gases are reported for petrochemical feedstocks, other uses, or both.

Lubricants. A substance used to reduce friction between bearing surfaces. Petroleum lubricants are produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. "Lubricants" includes all grades of lubricating oils from spindle oil and those used in greases. The three categories reported are:

- **Bright Stock**—A refined, high viscosity lubricating oil base stock that is usually made from residuum by a treatment such as desasphalting, acid treatment, or solvent extraction.
- **Neutral**—A distillate lubricating oil base stock with a viscosity that is usually not above Saybolt Universal Seconds (SUS) at 100° F. It is prepared by a treatment such as hydrotreating, acid treatment, or solvent extraction.
- **Other**—A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

Miscellaneous Products. Includes all finished products not classified elsewhere. "Miscellaneous products" include petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and other finished products.

Motor Gasoline Blending Components. Finished components in the gasoline range that will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

Motor Gasoline (Finished). A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines.

engines. Specifications for motor gasoline, as given in ASTM Specification D 439 or Federal Specification VV-G-1690B, include a boiling range of 122° to 158° F. at the 10-percent point to 365° to 374° F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. "Motor gasoline" includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

- **Finished Leaded Gasoline**—Contains more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating.
- **Finished Unleaded Gasoline**—Contains up to 0.05 grams of lead per gallon and 0.005 grams of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating.
- **Gasohol**—A blend of alcohol and finished motor gasoline that is no more than 90 percent of finished motor gasoline (leaded or unleaded as described above) and no less than 10 percent or more alcohol (ethanol or methanol).

Motor Gasoline (Total). Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

Naphtha-Type Jet Fuel. A fuel in the heavy naphtha boiling range with an average gravity of 52.8° API and 20 to 90 percent distillation temperatures of 290° to 470° F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. This category excludes ram-jet and petroleum rocket fuels, which are included in the "Miscellaneous Products" category.

Natural Gas. A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

Natural Gas Field Facility. A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

Natural Gas Plant Liquids. Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Natural Gas Processing Plant. A facility designed to recover natural gas liquids from a stream of natural gas that may or may not have been processed through lease separators or natural gas field facilities. The facility also controls the quality of natural gas to be marketed. Cycling plants are classified as gas processing plants.

Natural Gasoline. A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Producers Association.

OPEC. The acronym for the Organization of Petroleum Exporting Countries, oil-producing and-exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

Operable Distillation Capacity. The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and

grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtime, environmental constraints. Includes any shutdown capacity that could be placed in operation with days.

Other Hydrocarbons. Materials received by a refinery and consumed as raw materials. Inc hydrogen, coal, tar derivatives, gilsonite, and natural gas received by the refinery for reforming, hydrogen. Natural gas to be used as fuel is excluded.

Petrochemical Feedstocks. Chemical feedstocks derived from petroleum, principally for the manufacture of synthetic rubber and a variety of plastics. The categories reported are "Naphtha-less 400° F. end-point" and "Other oils over 400° F. end-point."

- Naphtha less than 400° F. end-point—A naphtha with an end point of less than 400° F. and is reported as used as a petrochemical feedstock.
- Other oils over 400° F. end-point—Oils with an end point over 400° F. and that are reported as used as a petrochemical feedstock.

Petroleum Coke. A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is 5.42-gallon barrels per short ton.

- Marketable Coke—Those grades of coke that are produced in delayed or fluid cokers and which may be recovered as relatively pure carbon. This "green" coke may be sold or further purified by calcining.
- Catalyst Coke—In many catalytic operations (i.e., catalytic cracking) carbon is deposited on catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon which is used as fuel in the refinery process. This carbon or coke is not recoverable in concentrated form.

Petroleum Products. Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, ethyl liquefied petroleum gases, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, miscellaneous products.

Petroleum Refinery. An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas plant liquids, other hydrocarbons, and alcohol.

Plant Condensate. One of the natural gas plant liquids, mostly pentanes and heavier hydrocarbons recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

Primary Stocks. Stocks of crude oil or petroleum products held in storage at (or in) leases, refiners, natural gas processing plants, pipelines, tank farms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. "Primary Stocks" excludes stocks of foreign origin that are held in bond warehouse storage.

Propane. A normally gaseous hydrocarbon, C_3H_8 , extracted from natural gas and refinery gas streams. It is used primarily as a fuel and as a petrochemical feedstock. Propane is covered by API Specification D1835, Gas Processors Association for commercial and HD-5 propane, and API Specification for special duty propane.

Propylene. An olefinic hydrocarbon, C_3H_6 , recovered from refinery and petrochemical processes. It is reported in the "Propane" category.

Residual Fuel Oil. Topped crude of refinery operations. "Residual Fuel Oil" includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D 396 and Federal Specification VV-F-815C; Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2; Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Imports of residual fuel oil include "Imported Crude Oil Burned as Fuel."

Road Oil. Any heavy petroleum oil, including residual asphaltic oils, used as a dust palliative and surface treatment of roads and highways. It is generally produced in six grades; from 0, the most liquid, to 5, the most viscous.

Special Naphthas. All finished products within the gasoline range that are used as paint thinners, cleaners, and solvents. These products are refined to a specified flash point and have a boiling range of 90° to 220° F. "Special naphthas" includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D 484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

Steam (Purchased). Steam that is purchased for use by a refinery that was not generated from within the refinery complex.

Still Gas (Refinery Gas). Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and refinery fuel use.

- **Petrochemical Feedstock Use**—Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc. are considered petrochemical products; therefore, only their feedstock equivalents are included.
- **Fuel Use**—All other still gas.

Strategic Petroleum Reserve (SPR). Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

Unfinished Oils. Includes all oils requiring further processing, except those requiring only mechanical blending.

Unfractionated Stream. Mixtures of unsegregated natural gas plant liquid components excluding those included in plant condensate. This product is extracted from natural gas.

Wax. A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is a light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades reported are microcrystalline, crystalline—fully refined, and crystalline—other. The conversion factor is 290 pounds per 42-gallon barrel.

- **Microcrystalline Wax**—Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

Penetration at 77° F. (D-1321)—60 maximum.
Viscosity at 210° F. in Saybolt Universal Seconds (SUS)
(D-88)—60 SUS (10.22 centistokes) minimum to 150
SUS (31.8 centistokes) maximum.
Oil content (D-721)—5 percent minimum.

- **Crystalline-Fully Refined Wax**—A light-colored paraffin wax having the following characteristics:

Viscosity at 210° F.
(D-88)—69.9 SUS (10.18 centistokes) maximum.
Oil Content (D-721)—0.5 percent maximum.
Other +20 color, Saybolt minimum.

- **Crystalline-Other Wax**—A paraffin wax having the following characteristics:

Viscosity at 210° F. (D-88)—69.9 SUS (10.18 centistokes) maximum.
Oil Content (D-721)—0.51 percent minimum to 16 percent maximum.

Western Hemisphere. That half of the earth that includes North and South America and the surrounding waters.

Bureau of Mines Petroleum Refining Districts and PAD Districts

PAD District

Refining District

I

East Coast—District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

Appalachian #1—The State of West Virginia, those parts of the States of Pennsylvania and New York not included in the East Coast District.

Appalachian #2—The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

Indiana—Illinois—Kentucky—The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

II

Minnesota—Wisconsin—North and South Dakota—The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

Oklahoma—Kansas—Missouri—The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

Texas Inland—The State of Texas except the Texas Gulf Coast District.

Texas Gulf Coast—The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller, Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

III

Louisiana Gulf Coast—The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

North Louisiana—Arkansas—The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

New Mexico—The State of New Mexico.

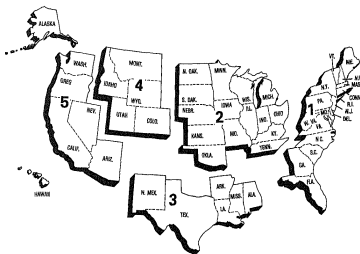
IV

Rocky Mountain—The States of Montana, Idaho, Wyoming, Utah, and Colorado.

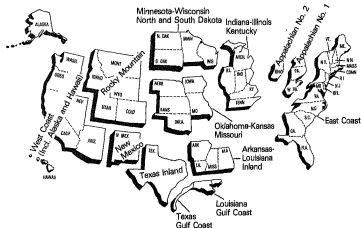
V

West Coast—The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

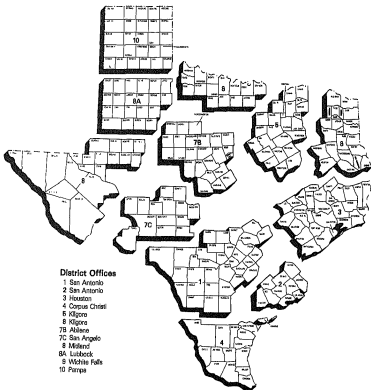
Petroleum Administration for Defense (PAD) Districts



Bureau of Mines Refining Districts



District Map Oil and Gas Division Railroad Commission of Texas



Explanatory Notes



Explanatory Notes

Note 1.1 EIA-64: Natural Gas Liquids Operations Report

Background

The EIA-64, "Natural Gas Liquids Operations Report" evolved from a survey designed and conducted by the United States Geological Survey beginning in 1911. This form collects data on the production, storage of natural gas plant liquids at natural gas processing plants and fractionators.

Description of Survey

Universe

The universe includes all operators of facilities designed to: (1) extract liquid hydrocarbons from natural gas streams (natural gas processing plants); (2) separate a combined products liquid hydrocarbon stream into its component products, i.e. propane, butane, natural gasoline, etc. (fractionators); or (3) store the liquid hydrocarbon output of plants and fractionators.

The mailing list is automated. It is maintained by matching periodically with the *LP Gas Alphas* listings (including supplements) and the *Oil and Gas Journal* Processing Plant Survey listings, and making changes reported by the respondents.

Information Collected

The data are submitted monthly by facility and include all products that the company controls through possession, regardless of ownership. The main items of information collected by the EIA-64 are shown by the example of the form presented below.

Collection Methods

Completed reports are required to be postmarked 20 days following the last day of the reporting month. Follow-up telephone calls are made to nonrespondents in order to collect data before publication of the aggregated data.

Imputing Missing Data

Imputation is performed only for companies that submitted a report in the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stock value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production, receipts, plant fuel use, and losses. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by a resubmission of actual data.

Response Rates

The initial response rate averages 85 percent, with a final response averaging 98 percent as a result of telephone follow-up procedures.

Data Processing

Upon receipt, the reports are reviewed for identification section omissions, duplicate submissions, and identification information changes. The data are then entered and edited. The edit program includes checks for invalid data entry codes, range checks for current-month to previous-month change (absolute and relative), arithmetic calculation errors, line balancing errors, etc. Telephone calls are made to respondents to resolve questions.

Note 1.2 EIA-87, 88, 89 and 90: Joint Petroleum Reporting System

Background

The Joint Petroleum Reporting System (JPRS) comprises four surveys: the "Refinery Report" (EIA-87); the "Bulk Terminal Stocks Report" (EIA-88); the "Pipeline Products Report" (EIA-89); and the

"Crude Oil Stocks Report" (EIA-90). This group of forms collects data on petroleum refinery operations and on storage of crude oil and petroleum products. The origins of JPRS lie in the voluntary petroleum reporting systems instituted by the Bureau of Mines (BOM) soon after it was established as a part of the Department of the Interior in May 1910.

Description of Survey

Universe

The respondent universe of each JPRS survey is defined as follows:

EIA-87: All petroleum refineries and plants producing finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, Hawaiian Foreign Trade Zone, and Guam.

EIA-88: All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline regardless of ownership of the material.

EIA-89: All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia.

EIA-90: Crude oil pipeline companies (gathering and trunk pipeline companies), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water (in excess of 1,000 barrels), regardless of ownership in the 50 States and the District of Columbia.

The list of respondents is kept current by checking for new respondents in the *Oil and Gas Journal* weekly magazine; newspaper articles; the Office of Resource Applications publication "Trends in Refinery Capacity & Utilization;" the Office of Refinery Operations (ERA) list of U.S. Refiners; and the annual survey EIA-177 "Capacity of Petroleum Refineries."

Information Collected

The main items of information collected by EIA-87, are shown by the example presented below. The EIA-88 and EIA-89 collect data on petroleum product stocks. The EIA-90 collects data on crude oil stocks and crude oil used directly as fuel.

Collection Methods

The data for the JPRS surveys are collected on a monthly basis. Completed forms are required to be postmarked by the 20th day following the report month. Telephone follow-up calls are made to nonrespondents in order to collect data before publication deadline. An automated mailing list is maintained and is used to monitor receipt of the forms.

Imputing Missing Data

Imputation is performed only for companies that submitted a report in the previous month. For these companies, the previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. The value of shipments is adjusted to balance stock level, production receipts, and losses. In the event that previous month's data were estimated, the respondent is contacted and requested to submit estimates if necessary, to be followed by a resubmission of actual data.

Response Rates

As of the filing deadline, the response rate of the JPRS respondents is over 90 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Thirty calendar days after the report month, data for companies that still fail to file the form are estimated based on prior month's data. Names of companies that fail to file for two consecutive months are forwarded to DOE for further noncompliance action. Final response rate is 100 percent.

Note 1.3 EIA-161, 162, 163, 164 and 165: Weekly Petroleum Reporting System

Background

The Weekly Petroleum Reporting System (WPRS) comprises five surveys: the "Refinery Report" (EIA-161); the "Bulk Terminal Stocks Report" (EIA-162); the "Pipeline Product Stock Report" (EIA-163); the "Crude Oil Stocks Report" (EIA-164); and the "Imports Report" (EIA-165).

The EIA weekly reporting system was designed to collect data similar to those collected under the monthly Joint Petroleum Reporting System (JPRS) (See Note 1.2). In the WPRS, selected petroleum companies report weekly data to EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On the Forms EIA-161 through EIA-164, companies report data on a custody basis. On the Form EIA-165, the importer of record reports each shipment entering the United States. Current weekly data and the most recent monthly data from the JPRS are used to estimate the published weekly totals.

Description of Survey

Universe

The sample of companies that report weekly in the WPRS was selected from the universe of companies that report monthly in either the JPRS system or the ERA-60 system (for imports). All sampled companies report data only for facilities in the 50 States and the District of Columbia.

The sampling frame for each weekly survey is defined as follows:

EIA-161: Uses the EIA-87 universe, which includes all petroleum refineries in the United States and its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and bulk terminals that blend motor gasoline.

EIA-162: Uses the EIA-88 universe, which includes all bulk terminal facilities in the United States and its territories that have total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline.

EIA-163: Based on the EIA-89 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that only transport natural gas liquids are not included in the EIA-163 frame. Only those pipeline companies which transport products covered in the weekly survey are included.

EIA-164: Uses the EIA-90 universe, which consists of all trunk pipeline companies in the United States and its territories which transport crude oil, all refining companies, all crude oil producers, all terminal operators, and all storers of 1,000 barrels or more of crude oil.

EIA-165: Uses the ERA-60 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico.

Sampling

The sampling procedure used for the weekly system is the cut-off method. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous period. Companies are chosen for the sample beginning with the largest and adding companies until the total sample covers about 90 percent of the total for the previous time period.

Collection Methods

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. All canvassed firms and terminal operating companies must file by 5:00 p.m. on the Monday following the close of the report period, 7 a.m. Friday. During the processing week, company corrections of the prior week's data are also entered.

Formula and Calculations

After the company reports have been checked and entered into the weekly data base, ratio estimates of the weekly totals are calculated from the reported data.

First, the current week's data for a given product reported by companies in that region are summed. (Call this weekly sum, W_j) Next, the most recent month's data for the product reported by those same companies are summed. (Call this monthly sum, M_j). Finally, let M_i be the sum of the most recent month's data for the product as reported by all companies. Then, the current week's ratio estimate for that product for all companies is given by.

$$W_i = \frac{M_i}{M_j} \cdot W_j$$

This procedure is used directly to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Under such conditions, the ratio method is known to result in large errors. Hence, a number of other procedures for estimating weekly imports were considered. The average ratio method was selected for estimating imports because it produces estimates that were close to benchmark values computed from monthly data. Estimates are obtained using the ratio method, but with each company in turn omitted from the sample. These estimates are then averaged to obtain the average ratio estimate.

Imputing Missing Data

The ratio method of estimation automatically imputes for nonresponse. Data from companies that do not respond are excluded from both the weekly and the monthly totals for the sampled companies.

Response Rates

The response rate as of the day after the filing deadline is about 80 percent for the EIA-161; 75 percent for the EIA-162; 95 percent for the EIA-163; 80 percent for the EIA-164; and greater than 96 percent for the EIA-165. However, more forms are received the next day, bringing the final response rates up. Late respondents are contacted by telephone. Nearly all of the major companies report on time. The nonresponse rate for the published estimates is usually between 2 percent and 5 percent.

Note 1.4 EIA-170: Tanker and Barge Shipments of Crude Oil and Petroleum Products Between Districts

Background

The EIA-170 survey collects data for calculation of monthly petroleum supply and disposition figures on U.S. and PAD District levels.

Instrument and Design

This form is designed to collect data on total movements by tanker and barge of crude oil and petroleum products between PAD Districts or between PAD Districts and the Panama Canal, by shipping State and receiving State.

Universe

The respondent universe of the EIA-170 consists of all known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are currently about 60 respondents.

Collection Methods

Survey data are collected by mail every month. The filing deadline is the 20th calendar day of the month following the report period. The response rate as of the filing deadline is about 98 percent. Late respondents are contacted by telephone. All responses are processed each month before release of the data for publication.

Note 1.5 ERA-60: Reports of Oil Imports into the United States and Puerto Rico

Background

The "Report of Oil Imports into the United States and Puerto Rico" (ERA-60) survey was designed by the Economic Regulatory Administration (ERA) of the Department of Energy to collect data on port of entry, country of origin, destination, and quantity of imported crude oil and petroleum products, as well as sulfur content and API gravity. All licensed importers and exporters of record are required to report. The "Shipments of Refined Products from Puerto Rico to the United States" (P-133-M-O) survey was designed to collect data on imports to the United States that are not covered by the ERA-60.

Universe

The monthly submission of Form ERA-60 and P-133-M-O is required by all licensed importers and exporters of record into the United States and Puerto Rico. The respondent universe consisted of approximately 750 firms as of June 30, 1981. The respondent universe for these surveys is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

Collection Methods

The survey data are collected by mail each month. It is mandatory for each respondent to file the ERA-60/P-133-M-O by the 15th working day of the month following the reporting period. Resubmissions are received frequently and are processed when received.

Response Rates

In December 1980, the survey had a response rate of 92 percent by the filing deadline. The universe was 640 at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard followup of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. Response rate is generally 98-99% by the time the data are first published. Revised publications are not generated as standard operating procedure. The ERA-60 file is never closed; resubmissions are constantly received and processed.

Note 1.6 Census Import (IM-145) and Export (EM-522 and EM-594) Tabulations

The foreign trade statistics program, conducted by the Bureau of the Census, involves compilation and dissemination of a large body of data relating to the imports and exports of the United States.

Import Statistics

Coverage

The import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise shipped in transit through the United States, when documented with Customs as an intransit movement.
2. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; shipments between any of these outlying areas; and imports into U.S. possessions from foreign countries.
3. U.S. merchandise returned by U.S. Armed Forces for their own use.

Source of Import Information

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501- 7505).

Imported petroleum is reported as "Imports for Consumption." Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

Country and Area of Origin

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

Export Statistics

Coverage

The export statistics reflect both government and nongovernment exports of domestic and foreign merchandise from the U.S. Customs territory (includes the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. Shipments between the United States and Puerto Rico, the Virgin Islands, Guam, American Samoa, and other U.S. possessions; between any of these outlying areas; and shipments from U.S. Possessions to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

Source of Export Information

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Shipper's Export Declarations are required to be filed with Customs officials, except when qualified exporters have been authorized to submit data in the form of magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations directly to the Bureau of the Census.

Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

Note 2 Estimation

The geographic coverage of all estimates is the 50 United States and the District of Columbia, including adjacent areas of the outer continental shelf, excluding the Hawaiian Foreign Trade Zone.

Note 2.1 Supply

The components of petroleum supply are field production, refinery production, imports, stock withdrawal or addition, crude oil used directly, and losses.

Field Production is the sum of crude oil (including lease condensate) production, natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. Reports of crude oil production from each of the 31 producing States are not received until several months after the other components of petroleum supply described in Explanatory Note 2.1 are available for publication. For an explanation of the crude oil estimation procedure used until the State reports are complete, see Explanatory Note 2.2.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operation Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-64, "Natural Gas Liquids Operations Report." Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.1.

Refinery Production of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-87, "Refinery Report." Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month.

Refinery production is also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey descriptions and other detail. It should also be noted that refineries do not report production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons and alcohol.

Imports of crude oil and petroleum products are reported monthly on Form ERA-60, "Report of Oil Imports into the United States and Puerto Rico," and Form P-138-M-O, "Shipments of Refined Products (including unfinished oils) from Puerto Rico to the United States." In addition, the Census Bureau Tabulation IM-146 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7506. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases (LPG), where Census data show a much higher level of imports than Energy Information Administration data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and because LPGs are not licensed products. Therefore, respondents that only import LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-146. Additional data taken from the IM-146 are relatively small quantities of naphtha and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

Stock Withdrawal (+) or Addition (-) is calculated by subtracting stocks at the end of the month from stocks at the beginning of the month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and reduce petroleum supplies distributed for domestic consumption. For survey forms used to make stock withdrawal or addition calculations see Explanatory Note 2.4.

Unaccounted-for Crude Oil is a balancing item that represents the difference between crude oil supply and disposition. Crude oil supply is the sum of field production, imports and stock withdrawal or addition, less crude used directly and losses. Crude oil disposition is the sum of exports and refinery input.

Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A negative result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used. This calculation is performed for crude oil to ensure that product supplied for crude oil is always zero.

Crude Oil Used Directly and Losses is the sum of crude oil losses at refineries, crude oil burned at refineries, and crude oil burned on leases. Crude oil losses and consumption at refineries are reported on Form EIA-87, "Refinery Report." Crude oil burned on leases is reported on Form EIA-90, "Crude Oil Stocks Report." Crude oil burned on leases is divided into two categories: crude burned as residual fuel oil and crude burned as distillate fuel oil. Crude burned on leases appears as a negative supply to crude oil (a reduction in crude oil supplies) and as a positive supply to residual and distillate fuel oil (an increase to these supplies).

Note 2.2: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the individual State conservation agencies, which collect crude oil production values for tax purposes. In addition, the U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of six State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports from the State conservation agencies and the U.S. Geological Survey. The six States that do not report monthly values are Indiana, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their histories annual crude oil production values.

There is a time lag of approximately 3 to 4 months between the end of the reporting month and the time when the actual values are available for this publication. In order to provide more timely crude oil production estimates, the Department of Energy has established a series of statistical models that forecast the volume of crude oil production based on the historical production patterns. The models use Auto Regressive Integrated Moving Average (ARIMA) to analyze series of monthly crude oil production values collected over several years.

In order to provide detailed crude oil production information on both the PAD District level and for the major producing States, the total United States crude oil production volume was separated into nine distinct groupings. The nine different time series are the monthly reported crude oil production volumes for: (1) all the States in PAD District 1; (2) all the states in PAD District 2; (3) Texas; (4) Louisiana; (5) the States in PAD District 3 excluding Texas and Louisiana; (6) all the States in PAD District 4; (7) Alaska; (8) California; and (9) the States in PAD District 5 excluding Alaska and California. Monthly data collected beginning in January 1973 are used for each of these time series.

A separate ARIMA model is identified for each time series. New model parameters are estimated monthly for each of these nine updated time series. Then, these ARIMA models are used to forecast crude oil production volumes for the month of interest. These values are then aggregated into PAD District and national totals. The forecasts made during 1981 had an average error of less than 0.6 percent compared to the monthly crude oil production volumes eventually reported by the States.

Note 2.3 Disposition

The components of petroleum disposition are refinery input, exports, and products supplied for domestic consumption.

Refinery Inputs of crude oil, NGPL and other liquids are reported monthly on survey Form EIA-87, "Refinery Report." Published inputs of unfinished oils, and motor and aviation gasoline blending components, equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production. Refinery inputs are also reported weekly on survey Form EIA-161, "Refinery Report." See Explanatory Notes 1.2 and 1.3 for survey description and other details.

Exports of crude oil and petroleum products are compiled from Census Bureau tabulations EM522 and EM594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-87.

Product supplied for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, plus crude oil used directly and losses (plus net receipts when calculated on a PAD District basis), minus refinery input, minus exports. This formula ensures that total disposition equals total supply. Products supplied indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative when total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) misreporting or delayed reporting of data, and (3) for calculations on a PAD District basis, incomplete coverage of interdistrict movements data compiled to calculate net receipts.

Note 2.4 Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-87, "Refinery Report," and Form EIA-90, "Crude Oil Stocks Report." Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form 161, "Refinery Report," and Form EIA-164, "Crude Oil Stocks Report." Primary stocks of petroleum products are summed from data reported on the Form EIA-64, "Natural Gas Liquids Operations Report," Form EIA-87, "Refinery Report," Form EIA-88, "Bulk Terminal Stocks Report," and Form EIA-89, "Pipeline Products Stocks Report." Primary stocks of petroleum products do not include secondary stocks held by dealers and jobbers, or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-161, "Refinery Report," Form EIA-162, "Bulk Terminal Stocks Report," and Form EIA-163, "Pipeline Products Stocks Report." For survey descriptions and other details see Explanatory Notes 1.1, 1.2, and 1.3.

Note 2.5 Average Stock Levels

The graphs displaying monthly stock levels of petroleum products, crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products provide the user with recent data as well as a summary of data from the most recent 3 year period from January through December or from July through June. This summary takes the form of an "average range" that includes seasonal variation determined from a longer time period. The average range represents the historical pattern; it is not a forecast.

These curves are updated every 6 months effective January 1 or July 1 by basing the "average ranges" on a more recent time period. At that time, each 3-year data series will be adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors were estimated by means of a seasonal adjustment technique developed at the Bureau of Census (Census X-11). The seasonal factors were assumed to be stable (i.e., unchanging from year to year) and additive (i.e., the series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels). The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors were very small relative to crude oil stock levels. Therefore, the seasonal factors for crude oil stock levels were set to zero. The seasonal factors for total petroleum (crude and products), distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products were derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors were based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973 and 1974 appeared to be different from those in recent years. It was therefore assumed that the seasonal patterns in 1973, 1974, and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for total petroleum (crude and products), crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and ethane, and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3 year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the "average range" is twice this standard error.

The upper curve of the "average range" is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

Note 2.6 Movements

Movements of crude oil between PAD Districts are reported on Form EIA-170, "Tanker and Barge Report." Petroleum product movements are reported on Forms EIA-170 and EIA-88, "Pipeline Products Report." Net receipts are calculated by summing total movements into and total movements from each PAD District by pipelines, tankers, and barges, and subtracting for the difference. Movements of crude oil by pipeline are not reported. For survey descriptions and other detail, see Explanatory Notes 1.2 and 1.4.

Note 2.7 Preliminary Monthly Statistics

Data from the Weekly Petroleum Reporting System (Forms EIA-161, 162, 163, 164 and 165) are used to estimate the most recent monthly values for the historical statistics. Since some of the weekly reporting periods overlap 2 adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To calculate monthly estimates of crude oil and petroleum product imports, crude oil input to refineries, and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel and residual fuel) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the 2 weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of earlier of the 2 weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 2.2.

Note 3 Accuracy of Petroleum Supply Data

Early in 1981, the Energy Information Administration completed an assessment of the accuracy of principal petroleum supply data series. ¹This assessment concentrated on two methods of analysis:

- Comparisons between EIA's final annual estimates published in the *Petroleum Statement Annual (PSA)* and annual estimates from independent sources.

- Comparisons between EIA's final monthly estimates published in the *PSA* and EIA's earlier estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* (predecessor of the *Monthly Petroleum Statement*).

Selected excerpts from these comparisons are presented below.

Comparisons of Annual Estimates

All of the systems that provide data for the *Petroleum Supply Monthly*, except for the weekly systems, try to collect data from the entire universe of their potential respondents. They do not sample, and have no sampling errors. Inaccuracies in the data still occur because of problems such as incomplete lists of respondents, errors in the responses, and conceptual errors in the design of the data systems. Such inaccuracies are hard to identify and even harder to quantify. Some understanding of the overall accuracy of the estimates can be achieved by comparing estimates derived from independent sources of data, as shown in the following tables. Close agreements among annual estimates from several independent sources support the conclusion that the estimates are accurate, and accuracy in the annual estimates implies accuracy in the monthly estimates that comprise the annual estimates.

Crude Oil Production

Comparisons among independent estimates of annual crude oil and lease condensate production lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent.

Crude Oil Imports

Comparisons among independent estimates of annual crude oil imports lead to the conclusion that the *PSA* estimates are probably accurate to within 1 percent. This conclusion is supported by a study of EIA and Customs/Census import data performed for EIA.²

Motor Gasoline Supplied

Comparisons among independent estimates of the annual volume of motor gasoline supplied for domestic use show that differences in the estimates grew between 1977 and 1979. By 1979, the EIA estimate of sales by refiners and the Environmental Protection Agency's estimate of production had grown about 5-7 percent larger than the comparable *PSA*, Lundberg, and American Petroleum Institute (API) estimates. Research conducted by EIA in 1979 and 1980³ confirmed that the lower

¹An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0242, June 1981.

²Maxima Corporation, *Petroleum Imports Reporting Systems, Preliminary Draft*, (Silver Spring, Maryland: February 1980). Prepared for the Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

³Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *An Evaluation of Published EIA Gasoline Supply Estimates* (Washington, D.C.: April 1980).

estimates were inaccurate, and identified changes in the petroleum industry that had an adverse effect on the PSA estimate. During 1980, EIA developed and tested improved procedures for collecting petroleum supply data, and implemented them in January 1981. (See Explanatory Note 4.)

Distillate Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of distillate fuel oil supplied for domestic use lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

Residual Fuel Oil Supplied

Comparisons among independent estimates of the annual volume of residual fuel oil supplied for domestic use seem to show sizable and consistent differences between the EIA estimates of sales by refiners and the PSA and API estimates. When imports of residual fuel oil by nonrefiners are added to the refiner sales, however, the difference between refiner sales and the PSA estimates are narrowed to within 1 percent. The comparisons therefore lead to the conclusion that the PSA estimates are probably accurate to within 1 to 2 percent.

Comparison of Estimates of the Volume of Crude Oil and Lease Condensate Production, 1977-1979

	Estimated Volume of Production in Millions of 42-U.S. Gallon Barrels ^a			Comparative Estimate as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from Petroleum Statement Annual ^b	3,121	3,178	3,009	///	///	///
Comparative Estimates						
American Petroleum Institute Estimate from API Monthly Statistical Report ^c	3,130	3,214	3,021	100.3%	101.1%	100.4%
Census Estimate from the Annual Survey of Oil and Gas ^d	—	3,148	3,016	—	99.1%	100.2%
Oil and Gas Journal Estimates ^e of Total Production derived from Monthly Data	3,168	3,165	3,005	101.6%	99.6%	99.9%
EIA Estimate from Annual Survey of Oil and Gas Reserves (EIA-23) ^f	3,102	3,144	3,001	99.4%	98.9%	99.7%
/// = Not applicable						
— = Not available						

^aVolumes are rounded to the nearest million barrels.

^bFrom Table 6 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

^cFrom issues of the American Petroleum Institute's *Monthly Statistical Report*. The annual values were obtained by summing the monthly values for each of the twelve-month periods.

^dFrom Table 1, p.2 of the Bureau of Census' *Annual Survey of Oil and Gas*, 1978.

^eFrom issues of the *Oil and Gas Journal*. Monthly estimates are in thousands of barrels per day. They are converted to millions of barrels by dividing by 1,000 and multiplying by the number of days in the reporting period.

^fFrom EIA's *U.S. Crude Oil and Natural Gas Reserves 1979 Annual Report* (Table 19, p. 33), *1978 Annual Report* (Table 16, p. 20), and *1977 Annual Report* (Table 22, p.36).

Geographic coverage: the 50 United States and District of Columbia with adjacent areas of the Outer Continental shelf.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

Comparison of Estimates of the Volume of Crude Oil Imports, 1977-1979

	Volume of Millions of 42-U.S. Gallon Barrels*			Comparative Estimates as a Percent of the Primary Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate of Receipts at Ports of Entry (ERA-60) from <i>Petroleum Statement, Annual</i> ^a	2,380	2,320	2,414	///	///	///
<u>Comparative Estimates</u>						
American Petroleum Institute Estimate of Receipts as Reported by Refiners ^a	2,346	2,323	2,360	98.6%	100.1%	97.8%
Customs/Census Estimate of Receipts at Ports of Entry (Customs Forms 7501 and 7502) ^b	2,415	2,338	2,431	101.5%	100.8%	100.7%
EIA Estimate of Inputs of Foreign Crude at Refineries (ETA-87) ^c	2,364	2,334	2,431	99.3%	100.6%	100.7%

/// = Not applicable

*Volumes are rounded to the nearest million barrels.

^aFrom Table 1 in EIA's *Petroleum Statement Annual* 1977, 1978, 1979. This table also includes imports for the Strategic Petroleum Reserve (SPR) which were 7.5 million in 1977, 58.8 million in 1978, and 24.4 million in 1979.

^bEstimate equals the sum of the annual estimate of imports derived from APT's *Monthly Statistics Report* (which excludes imports for SPR), and the EIA estimates for imports for the SPR which are listed in footnote b above. The annual estimates from API data are equal to the sum of the API monthly estimates weighted by the number of days in each month.

^cData on imports to Puerto Rico which are included in the source for these estimates have been excluded from these estimates in keeping with the geographic coverage of the table. Data are from computer printouts of the Bureau of Census Report IM-246-X dated April 8, 1980 (1977 and 1978 data) and December 19, 1980 (1979 data).

^dEstimate equals refinery inputs of foreign crude plus (minus) stock increases (decreases) of foreign crude. The data for the computation are published in EIA's *Petroleum Statement, Annuals*. The stock changes (all increases) are derived from data on stocks of crude oil at refineries, bulk terminals, and pipelines as reported on Form RIA-90, plus the increase in the SPR. This estimate excludes crude oil imported and not used as refinery input.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: *An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration*, DOE/EIA-0292.

Comparison of Estimates of the Volume of Motor Gasoline Supplied for Domestic Use, 1977-1979

	Volume in Millions of 42-U.S. Gallon Barrels ^a			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement Annual</i> ^b	2,573	2,711	2,826	///	///	///
Comparative Estimates						
EIA Estimate of Sales by Refiners (P-306) ^c	2,708	2,792	2,671	105.2%	103.0%	101.8%
Environmental Protection Agency Estimate derived from Production Data ^d	2,766	2,851	2,706	107.5%	105.2%	103.1%
Landberg Surveys, Inc. Estimate of U.S. Motor Gasoline Sales ^e	2,631	2,746	2,666	102.3%	101.3%	101.2%
American Petroleum Institute Estimate of Deliveries ^f	2,579	2,697	2,612	101.2%	99.5%	99.5%

/// = Not applicable

^aVolumes are rounded to the nearest million 42-U.S. gallon barrels.

^bDerived from Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979.

^cDerived from Table 1 of EIA's December issue of *Petroleum Market Share, Report on Sales of Refined Petroleum Products* 1977, 1978, 1979.

^dThe estimate shown is derived by substituting EIA Domestic Production values with values of domestic production tabulated from the Environmental Protection Agency Bo. Form 3620-2, "Lead Additive Report for Refineries." The EPA production estimates are 2,894 million barrels in 1977, 2,767 in 1978, and 2,648 in 1979 as compared from a summary sheet provided by Mr. Bob Summerhayes of EPA.

^eFrom the mid-June issues of the "National Petroleum News," 1979 and 1980.

^fAPI publishes monthly estimates in thousands of barrels per month of the volume of motor gasoline delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of motor gasoline multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0292.

Comparison of Estimates of the Volume of Distillate Fuel Oil (Including Kerosene) Supplied for Domestic Use, 1977-1979

	Volume in Millions of 42-U.S. Gallon Barrels ^a			Volume Supplied as a Percent of the PSA Estimate		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement Annual</i> ^b	1,269	1,307	1,275	///	///	///
Comparative Estimates						
EIA Estimate of Sales by Refiners (P-306) ^c	1,282	1,275	1,242	101.0%	97.6%	97.4%
American Petroleum Institute Estimate of Deliveries ^d	1,281	1,300	1,277	101.7%	98.6%	100.2%

/// = Not applicable

^aVolumes are rounded to the nearest million 42-U.S. gallon barrels.

^bDerived from Table 2 in EIA's "Petroleum Statement Annual", 1977, 1978, 1979.

^cDerived from Table 1 of EIA's December issue of *Petroleum Market Share, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

^dAPI publishes monthly estimates in thousands of barrels per month of the volume of distillate and kerosene delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of distillate and kerosene multiplied by the number of days per month.

Geographic coverage: the 50 United States and the District of Columbia.

SOURCE: An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0292.

Comparison of Estimates of the Volume of Residual Fuel Oil Supplied for Domestic Use, 1977-1979.

	Volume in Millions of 42-U.S. Gallon Barrels*			Volume Supplied as a Percent of the PSA Estimates		
	1979	1978	1977	1979	1978	1977
EIA Estimate from <i>Petroleum Statement, Annual</i> ^a	1,024	1,095	1,109	///	///	///
Comparative Estimates						
EIA Estimate of Sales by Refiners (P-306) ^a	796	832	847	80.8%	79.6%	80.1%
American Petroleum Institute Estimate of Deliveries ^a	1,044	1,101	1,114	102.0%	100.5%	100.4%

/// = Not Applicable

*Volumes are rounded to the nearest million 42-U.S. gallon barrels.

^aDerived From Table 2 in EIA's *Petroleum Statement Annual*, 1977, 1978, 1979. Refinery fuel use, subtracted from the figures in the source referenced below, has been reinstated in these estimates.

^aDerived from Table 1 of EIA's December issue of *Petroleum Market Shares, Report on Sales of Refined Petroleum Products*, 1977, 1978, 1979.

^aAPI publishes monthly estimates in thousands of barrels per month of the volume of residual fuel oil delivered from primary storage. The initial published monthly estimate is derived from API sources, but in later API publications the estimates are revised using EIA data. The values shown in the table are equal to the sums of the initial published API monthly estimates of residual fuel oil multiplied by the number of days per month.

Geographic Coverage: the 50 United States and the District of Columbia.

SOURCE: An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0292.

Comparisons of Monthly Estimates Over Time

Inaccuracies in petroleum data resulting from incomplete or delayed reports from respondents and from data processing errors are usually eliminated from the final PSA estimates. Such inaccuracies can still have important effects on the monthly estimates published in the *Petroleum Supply Monthly* and its predecessors. The following tables compare the initial monthly estimates published in the *Monthly Petroleum Statistics Report* and the *Petroleum Statement, Monthly* with the final monthly estimates published in the PSA. During 1977-1979, the *Monthly Petroleum Statistics Report* was published about 60 days after the end of the reporting month, and the *Petroleum Statement, Monthly* was published about 120-150 days after the end of the reporting month. The tables show that, both in terms of bias and in terms of standard deviation, the later estimates are consistently more accurate than the earlier estimates. In spite of this, the earlier estimates may have been more valuable to users of energy information because of the large difference in timeliness.

For purposes of comparison, the *Petroleum Supply Monthly* is scheduled to be published on about the same time lag as the *Monthly Petroleum Statistics Report*. Caution should be exercised, however, in drawing conclusions from this similarity. The *Petroleum Supply Monthly* uses improved data processing procedures developed and successfully implemented during 1981. In addition, since 1979, EIA has greatly improved the accuracy of its 60-day crude oil production estimates and is making progress in improving the accuracy of its 60-day import estimates.

Initial Monthly Estimates of Production, Stocks, and Imports of Crude Oil As A Percent of EIA's Final Published Estimates *
January 1977 - December 1979

	Production During Month		Primary Stocks At End of Month		Imports During Month	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> ^b	# 98.7%	1.6%	# 98.3%	1.4%	# 95.4%	2.4%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> ^c	# 99.6%	0.6%	100.0%	0.1%	# 98.4%	1.8%

Initial Monthly Estimates of Products Supplied for Domestic Use as A Percent of EIA's Final Published Estimates *
January 1977 - December 1979

	Motor Gasoline		Distillate Fuel Oil		Residual Fuel Oil	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> ^b	99.9%	1.8%	99.9%	2.3%	# 97.9%	2.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> ^c	100.0%	0.3%	99.7%	0.5%	99.4%	1.2%

Initial Monthly Estimates of End-of-Month Primary Stocks As a Percent of EIA's Final Published Estimates *
January 1977 - December 1979

	Motor Gasoline		Distillate Fuel Oil		Residual Fuel Oil	
	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation	Mean Percent	Standard Deviation
EIA's Estimates from the <i>Monthly Petroleum Statistics Report</i> ^b	99.7%	0.8%	99.7%	1.1%	100.1%	0.7%
EIA's Estimates from the <i>Petroleum Statement, Monthly</i> ^c	99.9%	0.2%	100.0%	0.1%	100.1%	0.5%

Represents a difference from 100% found to be statistically significant at the 95% level of confidence (n = 36).

*Final monthly estimates are from the "Petroleum Statement, Annual" for 1977, 1978 and 1979. The mean percent is calculated as follows: each preliminary estimate is first expressed as a percent of EIA's final published estimate; these are then summed and the sum is divided by the number of estimates. The standard deviation is the square root of the quantity computed by summing the squared deviation of the percents from the mean percent and then dividing by the number of percents.

^bBased on 36 initial estimates appearing in issues dated January 1977 - December 1979.

^cBased on 36 initial estimates appearing in issues dated January 1977 - December 1979.

SOURCE: An Assessment of the Accuracy of Principal Data Series of the Energy Information Administration, DOE/EIA-0292.

Note 4 Changes in Petroleum Industry Reporting

Petroleum statistics contained in this report for all years through 1980 were developed using definitions, concepts, reporting procedures and aggregation methods that are consistent with those developed by the U.S. Bureau of Mines. Research conducted by the Energy Information Administration in 1979 and 1980 indicated that changes had occurred in the petroleum industry that were not being adequately reflected in EIA's reporting systems.

EIA reporting forms, definitions, and procedures were modified beginning in January 1981 to describe industry operations more accurately. Unfortunately, empirical information is not available to precisely measure the data shortcomings throughout 1980. However, estimates of the magnitudes of differences in the major data series are described below to form a basis for comparing 1979, 1980, and 1981 data.

Motor Gasoline

Prior to 1979, the EIA product-supplied series for motor gasoline was consistently about 2 percent lower than the Federal Highway Administration (FHWA) gasoline-sales data series, which is derived from State tax receipts. This difference increased to about 4 percent in 1979 and 5 percent in 1980. There are two primary causes for this growing difference. First, refinery operations, particularly the flows of unfinished oils and the redesignation of some finished products, were not being accurately described on the EIA survey forms. Second, a large amount of gasoline was being produced away from refineries at "downstream blending stations" to take advantage of provisions in regulations governing the amount of lead that could be added. These blending stations were not reporting gasoline production to the EIA until the data system was changed in January 1981.

Quantitative estimates of the magnitude of the difference—in EIA's gasoline product supplied data in 1979 and 1980 have been made by the EIA and the American Petroleum Institute (API). The following table provides 1979 and 1980 data as published in the *Petroleum Statement Annual*, as well as EIA and API estimates of "recast" motor gasoline product supplied. EIA recast estimates were based upon preliminary monthly information in the *Monthly Petroleum Statement*. The ranges displayed in the EIA column reflect uncertainty in the estimates. Also shown are the FHWA motor gasoline sales statistics for those years. EIA has recently published a study of the quality of these FHWA data.¹

¹Office of Energy Information Validation, Energy Information Administration, U.S. Department of Energy, *Error Profile of the Motor Fuel Taxation Data used to Establish and Monitor State Emergency Conservation Targets* (Washington, D.C.: December, 1981).

**Finished Motor Gasoline Product Supplied on Old and New Basis
(Thousand Barrels per Day)**

	1979				1980			
	EIA Reported	API Recast	EIA Recast	FHWA ¹	EIA Reported	API Recast	EIA Recast	FHWA ¹
Jan	6,830	7,230	7,084- 7,246	6,984	6,323	6,789	6,630- 6,791	6,672
Feb	7,254	7,496	7,389- 7,568	7,538	6,596	6,968	6,831- 7,003	6,890
Mar	7,229	7,414	7,301- 7,463	7,316	6,406	6,753	6,607- 6,768	6,713
Apr	7,055	7,300	7,187- 7,353	7,375	6,800	7,014	6,886- 7,062	6,981
May	7,213	7,429	7,313- 7,475	7,428	6,729	6,964	6,823- 6,984	7,044
Jun	7,191	7,483	7,350- 7,516	7,441	6,657	6,966	6,824- 6,991	7,049
Jul	6,902	7,241	7,105- 7,266	7,299	6,743	6,973	6,960	7,132
Aug	7,330	7,546	7,426- 7,588	7,619	6,648	6,841	6,828	7,090
Sep	6,861	7,122	7,016- 7,282	7,232	6,510	6,692	6,962	6,686
Nov	6,791	7,068	6,956- 7,122	7,142	6,234	6,507	6,516	6,951
Dec	6,730	7,106	6,966- 7,127	7,064	6,632	6,948	6,936	6,983
Average	7,034	7,302	7,183- 7,347	7,309	6,579	6,882	6,806- 6,889	6,925

¹FHWA gasoline statistics published in their 1979 Table MP-33G, 08-06-80, contain aviation gasoline as well as motor gasoline. Only motor gasoline data are included in published 1980 data. Consequently, the 1979 data shown above were reduced by subtracting aviation gasoline product supplied quantities as published by EIA in the 1979 Petroleum Statement Annual. The 1980 FHWA data published in their 1980 Table MP-33GA, August 1981, did not require this adjustment.

Distillate and Residual Fuel Oil

Distillate and residual fuel oil refinery production statistics through 1980 were adjusted to account for an imbalance between unfinished oil supply and disposition. The reported quantities of refinery inputs of unfinished oils typically exceed the available supply of unfinished oils. It has been assumed that this occurs when distillate and residual fuel oil produced by a refinery is shipped to another refinery, where it is treated as unfinished oil. This oil is then reprocessed rather than used or sold as distillate or residual fuel oil.

For many years (including 1980), the difference between unfinished oil disposition and supply was subtracted from distillate and residual fuel oil production to adjust for this discrepancy. Two-thirds of the difference was applied to distillate, and one-third to residual fuel oil.

Beginning in January 1981 this adjustment was discontinued because there was not sufficient empirical evidence to support it. The following table presents distillate and residual fuel oil refinery production in 1980 as published (adjusted) and on the same basis as 1981 statistics are now being completed (unadjusted) to permit comparison between 1980 and 1981 data series. Adjusted distillate and residual fuel oil product supplied volumes differ from the unadjusted volumes by the same amounts as the adjusted and unadjusted production volumes.

Adjusted and Unadjusted Refinery Production, and Unadjusted Product Supplied of Distillate and Residual Fuel Oils, by Month for 1979 and 1980 (Thousand Barrels Per Day)

1979

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,043	3,108	65	4,646	1,912	1,946	34	3,594
Feb.	2,888	2,945	57	4,860	1,792	1,822	30	3,625
Mar.	3,019	3,026	7	3,671	1,719	1,723	4	3,243
Apr.	2,945	2,978	32	3,048	1,639	1,656	17	2,524
May	3,066	3,093	27	3,025	1,586	1,600	14	2,517
Jun.	3,153	3,187	35	2,743	1,548	1,566	18	2,601
Jul.	3,305	3,344	38	2,601	1,575	1,594	20	2,471
Aug.	3,321	3,359	38	2,790	1,584	1,603	20	2,570
Sep.	3,354	3,306	-48	2,599	1,627	1,602	-25	2,584
Oct.	3,251	3,217	-34	3,085	1,629	1,612	-17	2,523
Nov.	3,239	3,200	-39	3,208	1,736	1,716	-20	2,795
Dec.	3,221	3,238	17	3,725	1,894	1,903	9	3,022
Average	3,152	3,169	16	3,327	1,687	1,695	8	2,834

1980

Month	Distillate Fuel Oil				Residual Fuel Oil			
	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied	Adj. Ref. Prod.	Unadj. Ref. Prod.	Diff.	Unadj. Product Supplied
Jan.	3,013	3,093	80	3,794	1,771	1,812	41	3,108
Feb.	2,766	2,888	122	3,834	1,773	1,836	63	3,168
Mar.	2,557	2,690	133	3,312	1,584	1,652	68	2,726
Apr.	2,460	2,554	94	2,729	1,595	1,643	48	2,492
May	2,474	2,610	136	2,538	1,509	1,579	70	2,306
Jun.	2,646	2,721	75	2,392	1,575	1,613	38	2,359
Jul.	2,689	2,783	94	2,343	1,480	1,528	48	2,339
Aug.	2,461	2,582	121	2,258	1,444	1,506	62	2,348
Sep.	2,686	2,726	40	2,627	1,495	1,516	21	2,380
Oct.	2,589	2,650	61	2,981	1,512	1,543	31	2,258
Nov.	2,703	2,823	120	3,069	1,579	1,641	62	2,513
Dec.	2,891	3,052	161	3,776	1,660	1,743	83	2,762
Average	2,561	2,764	103	2,969	1,580	1,634	54	2,562

Total Petroleum Products

The imbalance between the supply and disposition of unfinished oils is now reported as part of the reclassified products (line 39) in the U.S. Petroleum Balance (Table 1). Imbalances between the supply and disposition of gasoline blending components comprise the remainder of the reclassified in Table 1. These imbalances are reported as negative product supplied in the Other Liquids section of the table of Supply and Disposition Statistics (Table 2). Since these changes only involve redistribution of the volumes of gasoline, distillate and residual fuel oil, gasoline blending components, and unfinished oils, the total volume of petroleum products supplied remains unaffected by them.

Note 5 Notes on Tables

5.1 Crude Oil and Petroleum Products Overview statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Plant Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Petroleum Products Exports is the sum of Natural Gas Plant Liquids and LRGs, Other Liquids, and Finished Petroleum Products Exports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

5.2 Crude Oil Supply and Disposition statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

5.3 Finished Motor Gasoline Supply and Disposition statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

5.4 Distillate and Residual Fuel Oil Supply and Disposition statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Crude Used Directly, Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

5.5 Liquefied Petroleum Gases and Ethane statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.
- Ending stocks appear in thousands of barrels in Table 2.

5.6 Other Petroleum Products Supply and Disposition statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.
- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.
- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

Note 5.7 Table 1. U.S. Petroleum Balance

- Lines (1) through (3) of Table 1: Crude oil (including lease condensate) production for "Alaska," "Lower 48 States," and "Total U.S." are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 2.2), and taking the difference to equal production in the lower 48 states.
- Line (5) of Table 1: SPR imports are reported on Survey Form ERA-60.
- Line (12) of Table 1: "Total Other Sources" equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil plus crude used as fuel and losses in Table 2.
- Line (14) of Table 1: Natural gas plant liquids (NGPL) "Production" equals field production of natural gas plant liquids (NGPL) plus field production of finished petroleum products in Table 2.
- Line (16) of Table 1: NGPL "Imports" equals the sum of the imports of natural gasoline and isopentane, unfractionated stream, and plant condensate imports in Table 2.
- Line (16) of Table 1: NGPL "Stock Withdrawal (+) or Addition (-)" is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate in Table 2.
- Line (17) of Table 1 equals the sum of lines (14), (15), and (16) of Table 1.
- Line (18) of Table 1: unfinished oils and gasoline blending components "Stock Withdrawal (+) or Addition (-)" equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.
- Line (20) of Table 1: "Other Hydrocarbons and Alcohol New Supply" equals the field production of same in Table 2.
- Line (21) on Table 1: "Refinery Processing Gain" is a balancing item equal to total refinery production minus total refinery input in Table 2.
- Line (22) on Table 1: "Crude Used Directly" equals the sum of crude oil used directly as distillate and residual fuel oils in Table 2.
- Line (23) of Table 1: "Total Other Liquids" equals the sum of lines (18) through (22) of Table 1.
- Line (24) of Table 1: "Total Production of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or

addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils in Table 2.

- Line (25) of Table 1: "Gross Imports of Refined Products" equals imports of LPG and ethane plus imports of finished petroleum products in Table 2.

- Line (26) of Table 1: "Exports of Refined Products" equals exports of LPG and ethane plus exports of finished petroleum products in Table 2.

- Line (27) of Table 1: "Net Imports of Refined Products" equals the difference between lines (25) and (26) of Table (1).

- Line (28) of Table 1: "Total New Supply of Products" equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil used as distillate and residual fuel oils; plus imports of LPG and ethane and finished petroleum products; minus exports of LPG and ethane and finished petroleum products in Table 2.

- Line (29) of Table 1: "Refined Products Stocks Withdrawal (+) or Addition (-)" equals the sum of stock withdrawal (+) or addition (-) for LPG and ethane, and finished petroleum products in Table 2.

- Line (30) of Table 1: "Total Petroleum Products Supplied for Domestic Use" equals total products supplied in Table 2.

- Lines (31) through (37) of Table 1 equal the respective products supplied in Table 2.

- Line (38) of Table 1: "Other Products Supplied" equals the sum of natural gasoline and isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F. for petrochemical feedstock uses, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, and miscellaneous products supplied in Table 2.

- Line (39) of Table 1: "Total Reclassified" is a balancing item equal to the sum of unfinished oils, motor gasoline blending components, and aviation gasoline blending components products supplied in Table 2.

- Line (40) of Table 1: "Total Product Supplied" is equal to total products supplied in Table 2.

- The sum of lines (41) and (42) of Table 1, stocks of "Crude Oil and Lease Condensate (Excluding SPR)" and stocks held by the "Strategic Petroleum Reserve," equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-90.

- Line (46) of Table 1, stocks of "Refined Products," equals the sum of LPG and ethane and finished petroleum product stocks in Table 2.

